

=> fil reg

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STRUCTURE FILE UPDATES: 30 NOV 2009 HIGHEST RN 1194522-11-6  
DICTIONARY FILE UPDATES: 30 NOV 2009 HIGHEST RN 1194522-11-6

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

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=> fil hcap

FILE 'HCAPLUS' ENTERED AT 12:45:46 ON 02 DEC 2009  
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FILE COVERS 1907 - 2 Dec 2009 VOL 151 ISS 23  
FILE LAST UPDATED: 1 Dec 2009 (20091201/ED)  
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009  
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

HCAplus now includes complete International Patent Classification (IPC)  
reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> d que 146

10/557,620

L1 1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON US20070059108/PN  
L2 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 79-39-0/RN  
L3 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON POLYMETHACRYLAMID  
E/CN  
L4 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON PARAFFIN/CN  
L5 3 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON PARAFFINS/CN  
L6 2895 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L2  
L7 981 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L3  
L8 119 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L4  
L9 157 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L5  
L10 QUE SPE=ON ABB=ON PLU=ON SOIL? OR CLAY? OR ARGILLACER  
OUS?  
L11 135 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L10 AND (L6 OR  
L7)  
L12 1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L11 AND L1  
L13 11 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L11 AND (CEMENT?  
OR LIME?)  
L14 0 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L13 AND (L8 OR  
L9)  
L15 0 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L11 AND (L8 OR  
L9)  
L16 1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L11 AND PARAFFIN?  
  
L17 QUE SPE=ON ABB=ON PLU=ON KAOLINITE? OR MONTMORILLONIT  
E SMECTITE? OR ILLITE? OR CHLORITE? OR BENTONITE? OR CERA  
MIC? OR PHYLLOSILICAT?  
L18 331 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L17 AND (L6 OR L7  
OR ?METHACRYLAMID? OR ?METH ACRYLAMID?)  
L19 6 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L18 AND (L8 OR L9  
OR PARAFFIN?)  
L20 17 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L12 OR L13 OR  
L14 OR L15 OR L16) OR L19  
L21 7 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L20 AND CEMENT?/SC  
, SX  
L22 12 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L11 AND CEMENT?/S  
C, SX  
L23 20 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L18 AND CEMENT?/S  
C, SX  
L24 28 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L21 OR L22 OR  
L23)  
L25 22 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L24 AND (1840-2003  
) /PRY,AY,PY  
L41 86 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L6 OR L7) AND  
(CLAY? OR ARGILLACEROUS?)  
L42 0 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L6 OR L7) AND  
ARGILLACEROUS?  
L43 22 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L25 OR L42  
L44 8 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L41 AND CEMENT?/SC  
, SX  
L45 7 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L44 AND (1840-2003  
) /PRY,AY,PY  
L46 22 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L43 OR L45

=> fil wpix

FILE 'WPIX' ENTERED AT 12:45:53 ON 02 DEC 2009

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FILE LAST UPDATED: 30 NOV 2009 <20091130/UP>

MOST RECENT UPDATE: 200977 <200977/DW>

DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE  
>>> Now containing more than 1.4 million chemical structures in DCR <<<

>>> IPC, ECLA, US National Classifications and Japanese F-Terms  
and FI-Terms have been updated with reclassifications to  
end of September 2009.

No update date (UP) has been created for the reclassified  
documents, but they can be identified by  
specific update codes (see HELP CLA for details) <<<

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<http://scientific.thomsonreuters.com/support/patents/coverage/latestupdates/>

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[http://www.stn-international.com/DWPIAnaVist2\\_0608.html](http://www.stn-international.com/DWPIAnaVist2_0608.html)

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

>>> Japanese FI-TERM thesaurus in field /FCL added --> see NEWS <<<

=> d que 135

|     |      |     |           |        |        |   |
|-----|------|-----|-----------|--------|--------|---|
| L10 |      | QUE | SPE=ON    | ABB=ON | PLU=ON | SOIL? OR CLAY? OR ARGILLACER<br>OUS?  |
| L17 |      | QUE | SPE=ON    | ABB=ON | PLU=ON | KAOLINITE? OR MONTMORILLONIT<br>E SMECTITE? OR ILLITE? OR CHLORITE? OR BENTONITE? OR CERA<br>MIC? OR PHYLLOSILICAT? |
| L26 |      | QUE | SPE=ON    | ABB=ON | PLU=ON | ?METHACRYLAMID? OR ?METH ACR<br>YLAMID?   |
| L27 | 1029 | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L26 AND (L10 OR L17)   |
| L28 | 95   | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L27 AND CEMENT?  |
| L29 | 2    | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L28 AND PARAFFIN?  |
| L30 | 1    | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON US20070059108/PN   |
| L31 | 0    | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L27 AND ARGILLACEOUS<br>?  |
| L32 | 3    | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L28 AND C04B0026?/IP<br>C  |
| L33 | 6    | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON (L29 OR L30 OR L31<br>OR L32)  |
| L34 | 9    | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L27 AND C04B0026?/IP<br>C  |
| L35 | 12   | SEA | FILE=WPIX | SPE=ON | ABB=ON | PLU=ON L33 OR L34   |

=> fil pascal

FILE 'PASCAL' ENTERED AT 12:46:04 ON 02 DEC 2009

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FILE LAST UPDATED: 30 NOV 2009 <20091130/UP>

FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE  
IN THE BASIC INDEX (/BI) FIELD <<<

=> d que 137

```
L10      QUE  SPE=ON  ABB=ON  PLU=ON  SOIL? OR CLAY? OR ARGILLACER
        OUS?
L17      QUE  SPE=ON  ABB=ON  PLU=ON  KAOLINITE? OR MONTMORILLONIT
        E SMECTITE? OR ILLITE? OR CHLORITE? OR BENTONITE? OR CERA
        MIC? OR PHYLLOSILICAT?
L26      QUE  SPE=ON  ABB=ON  PLU=ON  ?METHACRYLAMID? OR ?METH ACR
        YLAMID?
L36      19 SEA FILE=PASCAL SPE=ON  ABB=ON  PLU=ON  L26 AND (L10 OR
        L17)
L37      0  SEA FILE=PASCAL SPE=ON  ABB=ON  PLU=ON  L36 AND (CEMENT?
        OR LIME?)
```

=> fil compendex

FILE 'COMPENDEX' ENTERED AT 12:46:13 ON 02 DEC 2009  
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FILE LAST UPDATED: 30 NOV 2009 <20091130/UP>  
 FILE COVERS 1970 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE IN  
 THE BASIC INDEX (/BI), ABSTRACT (/AB), and TITLE (/TI) FIELDS >>>

<<< Reloaded and enhanced COMPENDEX file is now available  
 - see 'HELP RLOAD' for details <<<

=> d que 139

```
L10      QUE  SPE=ON  ABB=ON  PLU=ON  SOIL? OR CLAY? OR ARGILLACER
        OUS?
L17      QUE  SPE=ON  ABB=ON  PLU=ON  KAOLINITE? OR MONTMORILLONIT
        E SMECTITE? OR ILLITE? OR CHLORITE? OR BENTONITE? OR CERA
        MIC? OR PHYLLOSILICAT?
L26      QUE  SPE=ON  ABB=ON  PLU=ON  ?METHACRYLAMID? OR ?METH ACR
        YLAMID?
L38      33 SEA FILE=COMPENDEX SPE=ON  ABB=ON  PLU=ON  L26 AND (L10 OR
        L17)
L39      0  SEA FILE=COMPENDEX SPE=ON  ABB=ON  PLU=ON  L38 AND
        (CEMENT? OR LIME?)
```

=> fil japio

FILE 'JAPIO' ENTERED AT 12:46:20 ON 02 DEC 2009  
 COPYRIGHT (C) 2009 Japanese Patent Office (JPO)- JAPIO

FILE LAST UPDATED: 1 DEC 2009 <20091201/UP>  
 MOST RECENT PUBLICATION DATE: 27 AUG 2009 <20090827/PD>  
 >>> GRAPHIC IMAGES AVAILABLE <<<

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION (SLART) IS AVAILABLE  
 IN THE BASIC INDEX (/BI) FIELD <<<

=> d que 140

```
L10      QUE  SPE=ON  ABB=ON  PLU=ON  SOIL? OR CLAY? OR ARGILLACER
```

OUS?  
 L17 QUE SPE=ON ABB=ON PLU=ON KAOLINITE? OR MONTMORILLONIT  
 E SMECTITE? OR ILLITE? OR CHLORITE? OR BENTONITE? OR CERA  
 MIC? OR PHYLLOSILICAT?  
 L26 QUE SPE=ON ABB=ON PLU=ON ?METHACRYLAMID? OR ?METH ACR  
 YLAMID?  
 L38 33 SEA FILE=COMPENDEX SPE=ON ABB=ON PLU=ON L26 AND (L10 OR  
 L17)  
 L40 11 SEA FILE=JAPIO SPE=ON ABB=ON PLU=ON L38 AND (CEMENT? OR  
 LIME?)

=> dup rem 146 135 137 139 140

L37 HAS NO ANSWERS

L39 HAS NO ANSWERS

FILE 'HCAPLUS' ENTERED AT 12:46:40 ON 02 DEC 2009

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PROCESSING COMPLETED FOR L46

PROCESSING COMPLETED FOR L35

PROCESSING COMPLETED FOR L37

PROCESSING COMPLETED FOR L39

PROCESSING COMPLETED FOR L40

L47 44 DUP REM L46 L35 L37 L39 L40 (1 DUPLICATE REMOVED)

ANSWERS '1-22' FROM FILE HCAPLUS

ANSWERS '23-33' FROM FILE WPIX

ANSWERS '34-44' FROM FILE JAPIO

=> d 1-22 ibib ed abs hitstr hitind

L47 ANSWER 1 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2000:31539 HCAPLUS Full-text

DOCUMENT NUMBER: 132:97015

TITLE: Water-soluble polymers as superplasticizers for  
 fireproofing concrete mixes with low  
~~cement~~ content

INVENTOR(S): Wache, Steffen; Plank, Johann; Wutz, Konrad;  
 Bichler, Manfred

PATENT ASSIGNEE(S): SKW Trostberg A.-G., Germany

SOURCE: Ger. Offen., 6 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO.  | DATE     |
|---------------|------|----------|------------------|----------|
| -----         | ---  | -----    | -----            | -----    |
| DE 19830760   | A1   | 20000113 | DE 1998-19830760 | 19980709 |
|               |      |          | <--              |          |
| WO 2000002827 | A2   | 20000120 | WO 1999-EP4813   | 19990708 |
|               |      |          | <--              |          |
| WO 2000002827 | A3   | 20000518 |                  |          |

10/557,620

W: JP, KR, US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,  
NL, PT, SE

EP 1098860 A2 20010516 EP 1999-936502 19990708  
<--

EP 1098860 B1 20040407

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
PT, IE, FI

JP 2002520243 T 20020709 JP 2000-559061 19990708  
<--

AT 263743 T 20040415 AT 1999-936502 19990708  
<--

US 6995105 B1 20060207 US 2001-720963 20010213  
<--

PRIORITY APPLN. INFO.: DE 1998-19830760 A 19980709  
<--

WO 1999-EP4813 W 19990708  
<--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 13 Jan 2000

AB Dry mixts. of water-soluble monomers comprise (a) maleic, fumaric, itaconic acid or their alkali, alkaline earth, or ammonium salts 5-90, (b) vinylsulfonic, 2-Acrylamido-2-methylpropanesulfonic, styrenesulfonic, or vinylphosphonic acid and their alkali, alkaline earth, or ammonium salts or sodiummethallylsulfonate 5-90, and/or (c) acrylic acid, methacrylic acid, acrylamide, and methacrylamide 5-90 weight%. The polymer mixture has a mol. weight  $\leq 50,000$ , preferably 1,000-15,000. Silicic acid, ~~lime~~, potash, soda, or microsilica can be added to improve the mixture fireproofness. These superplasticizer mixts. are suitable for refractory concrete mixes with very low ~~cement~~ content, e.g., .apprx.1.5 weight%.

IT 25014-12-4, PolyMethacrylamide  
(Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)

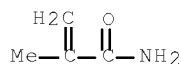
RN 25014-12-4 HCAPLUS

CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 79-39-0

CMF C4 H7 N O



IC ICM C04B026-04

ICS C04B035-66

CC 58-2 (~~Cement~~, Concrete, and Related Building Materials)

ST water soluble polymer superplasticizer low ~~cement~~  
fireproofing concrete; refractory concrete mix polymeric  
superplasticizer

IT Antifoaming agents

Concrete modifiers

Foaming agents

Refractories

Setting agents

Stabilizing agents

- (Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Acrylic polymers, uses  
Bauxite  
(Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Setting agents  
(accelerators; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Concrete modifiers  
(air-entraining agents; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT ~~Cement~~ (construction material)  
(aluminous; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT ~~Lime~~ (chemical)  
(flour; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Clays, uses  
(high-dispersed; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Limestone, uses  
(highly dispersed; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Setting agents  
(retarders; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT Plasticizers  
(superplasticizers; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT 60-24-2, 2-Mercaptoethanol 497-19-8, Soda, uses 498-23-7, Citraconic acid 1302-67-6, Spinel 1302-74-5, Corundum, uses 1343-98-2, Silicic acid 1344-28-1, Alumina, uses 1561-92-8, Sodiummethallylsulfonate 7727-54-0 9003-01-4, Polyacrylic acid 9003-01-4D, PolyAcrylic acid, alkali, alkaline earth, or ammonium salt 9003-05-8, PolyAcrylamide 9003-16-1, PolyFumaric acid 9003-16-1D, PolyFumaric acid, alkali, alkaline earth, or ammonium salt 9003-39-8, PolyN-Vinylpyrrolidone 12183-80-1, Andalusite 24937-72-2, PolyMaleic anhydride 25014-12-4, PolyMethacrylamide 25087-26-7, PolyMethacrylic acid 25087-26-7D, PolyMethacrylic acid, alkali, alkaline earth, or ammonium salt 25119-64-6, PolyItaconic acid 25119-64-6D, PolyItaconic acid, alkali, alkaline earth, or ammonium salt 25300-97-4, PolyItaconic anhydride 26099-09-2, PolyMaleic acid 26099-09-2D, PolyMaleic acid, alkali, alkaline earth, or ammonium salt 26101-52-0, PolyVinylsulfonic acid 26101-52-0D, PolyVinylsulfonic acid, alkali, alkaline earth, or ammonium salt 26793-34-0, PolyN,N-Dimethylacrylamide 27119-07-9, Poly2-Acrylamido-2-methylpropanesulfonic acid 27119-07-9D, Poly2-Acrylamido-2-methylpropanesulfonic acid, alkali, alkaline earth, or ammonium salt 27754-99-0, PolyVinylphosphonic acid 27754-99-0D, PolyVinylphosphonic acid, alkali, alkaline earth, or ammonium salt 50851-57-5, PolyStyrenesulfonic acid 50851-57-5D, PolyStyrenesulfonic acid, alkali, alkaline earth, or ammonium salt 254451-49-5  
(Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT 1310-58-3, Potash, uses  
(highly dispersed; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)
- IT 7631-86-9, Silica, uses

10/557,620

(micro; Water-soluble polymers as superplasticizers for fireproofing concrete mixes with low ~~cement~~ content)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L47 ANSWER 2 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:300447 HCAPLUS Full-text

DOCUMENT NUMBER: 147:148830

TITLE: A composition for forming porous bodies, in particular ~~ceramic~~ and metal forms and a process for the preparation thereof

INVENTOR(S): Santanu, Dhara; Mamata, Pradhan; Parag, Bhargava

PATENT ASSIGNEE(S): Indian Institute of Technology, India

SOURCE: Indian Pat. Appl., 21pp.

CODEN: INXXBQ

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.     | KIND | DATE     | APPLICATION NO. | DATE     |
|----------------|------|----------|-----------------|----------|
| -----          | ---- | -----    | -----           | -----    |
| IN 2002CA00331 | A    | 20060113 | IN 2002-CA331   | 20020527 |

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PRIORITY APPLN. INFO.: IN 2002-CA331 20020527

<--

ED Entered STN: 19 Mar 2007

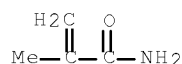
AB A composition for forming porous bodies comprising a ~~ceramic~~ or metal powder such as herein described, the ~~ceramic~~ or metal particulate loading being in the range of 10 to 80 volume percent water, dispersant and at least a binder such as herein in the range of 4 to 50 weight% on a dry powder weight basis.

IT 79-39-0, Methacrylamide

(slurry compns. for forming foamed cement, ~~ceramic~~ and metal articles)

RN 79-39-0 HCAPLUS

CN 2-Propenamide, 2-methyl- (CA INDEX NAME)



IC ICM C04B035-56

ICS C04B038-10

CC 57-2 (Ceramics)

Section cross-reference(s): 56, 58

ST lightwt foamed ~~ceramic~~ slurry compn molding coagulation sintering; metal foam slurry compn molding coagulation drying; cement lightwt foamed block slurry compn molding

IT Construction materials

(blocks, lightwt., foamed cement; slurry compns. for forming foamed cement, ~~ceramic~~ and metal articles)

IT Foams

(~~ceramic~~ and metal; slurry compns. for forming foamed cement, ~~ceramic~~ and metal articles)

IT Slurries

(~~ceramic~~; slurry compns. for forming foamed cement, ~~ceramic~~ and metal articles)



- IT Ashes (residues)  
(fly; slurry compns. for forming foamed cement, ceramic and metal articles)
- IT Ceramics  
(foams; slurry compns. for forming foamed cement, ceramic and metal articles)
- IT Metals  
(foams; slurry compns. for forming foamed cement, ceramic and metal articles)
- IT Cement  
(lightwt. foamed blocks; slurry compns. for forming foamed cement, ceramic and metal articles)
- IT Ceramics  
(slurries; slurry compns. for forming foamed cement, ceramic and metal articles)
- IT Coagulation  
Foaming  
Foaming agents  
Molding of ceramics  
Powder metallurgy  
Sintering  
Surfactants  
(slurry compns. for forming foamed cement, ceramic and metal articles)
- IT Ovalbumin  
(slurry compns. for forming foamed cement, ceramic and metal articles)
- IT 57-09-0, Cetyl trimethylammonium bromide  
(foaming agent; slurry compns. for forming foamed cement, ceramic and metal articles)
- IT 57-50-1, Sucrose, uses 79-39-0, Methacrylamide  
110-26-9, Methylenebisacrylamide 409-21-2, Silicon carbide, uses 1306-06-5, Hydroxyapatite 1314-23-4, Zirconia, uses 1336-21-6, Ammonium hydroxide 1344-28-1, Alumina, uses 3012-65-5, Dibasic ammonium citrate 6484-52-2, Ammonium nitrate, uses 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-32-6, Titanium, uses 7440-48-4, Cobalt, uses 7631-86-9, Silica, uses 7697-37-2, Nitric acid, uses 9003-03-6, Polyacrylic acid ammonium salt 9005-25-8, Starch, uses 12033-89-5, Silicon nitride, uses 12597-69-2, Steel, uses 13473-90-0, Aluminum nitrate  
(slurry compns. for forming foamed cement, ceramic and metal articles)

L47 ANSWER 3 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2004:800773 HCAPLUS Full-text  
 DOCUMENT NUMBER: 141:300099  
 TITLE: Materials and procedure for soil  
 stabilization by sealing with the mixture of silt,  
 cement, and methacrylamide  
 INVENTOR(S): Asendorf, Knut; Kittler, Falk  
 PATENT ASSIGNEE(S): Consolid Technik Deutschland GmbH, Germany;  
 Saechsische Bau GmbH  
 SOURCE: Ger. Offen., 8 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

|            |      |      |                 |      |
|------------|------|------|-----------------|------|
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|

|   |    |          |                  |            |
|---|----|----------|------------------|------------|
| DE 10312325   | A1 | 20040930 | DE 2003-10312325 | 20030319   |
|   |    |          | <--              |            |
| WO 2004083532   | A1 | 20040930 | WO 2004-DE528    | 20040316   |
|   |    |          | <--              |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA,<br>CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB,<br>GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,<br>KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,<br>MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,<br>SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,<br>VN, YU, ZA, ZM, ZW<br>RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM,<br>AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE,<br>DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT,<br>RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,<br>ML, MR, NE, SN, TD, TG |    |          |                  |            |
| EP 1604067  | A1 | 20051214 | EP 2004-720844   | 20040316   |
|   |    |          | <--              |            |
| EP 1604067  | B1 | 20080806 |                  |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,<br>PL, SK   |    |          |                  |            |
| AT 403779   | T  | 20080815 | AT 2004-720844   | 20040316   |
|   |    |          | <--              |            |
| US 20070059108  | A1 | 20070315 | US 2005-557620   | 20051118   |
|   |    |          | <--              |            |
| PRIORITY APPLN. INFO.:  |    |          | DE 2003-10312325 | A 20030319 |
|   |    |          | <--              |            |
|   |    |          | WO 2004-DE528    | W 20040316 |

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 01 Oct 2004

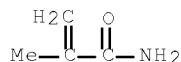
AB The invention concerns a material and a procedure for ~~soil~~ stabilization. The invented sealants are based on disposal materials, which provide a flexible, high-grade, inexpensive and durable sealing of new and already existing structures by bringing in a core sealing. The sealant consists silt and methacrylamide, and additive (especially ~~cement~~ and/or ~~lime~~) breaking the cladding water open around the grain for sealing structures of a mixture of ~~soil~~. Regarding the procedure, the mixture prepared from the ~~soil~~ and additives is sprayed on into the structure injected or superficially.

IT 79-39-0, Methacrylamide

(materials and procedure for ~~soil~~ stabilization by  
sealing with mixture of silt, ~~cement~~ and methacrylamide)

RN 79-39-0 HCAPLUS

CN 2-Propenamide, 2-methyl- (CA INDEX NAME)



IC ICM C04B024-26

ICS C04B024-08; C04B014-10; E02D031-00; E02D003-12; C09K017-40

CC 58-5 (~~Cement~~, Concrete, and Related Building Materials)

Section cross-reference(s): 38

ST ~~soil~~ stabilization silt methacrylamide ~~cement~~  
~~lime~~ sealing

- IT Cement  
Sealing  
Silt  
Soil stabilization  
(materials and procedure for soil stabilization by  
sealing with mixture of silt, cement and methacrylamide)
- IT Lime (chemical)  
(materials and procedure for soil stabilization by  
sealing with mixture of silt, cement and methacrylamide)
- IT Recycling  
(silt; materials and procedure for soil stabilization by  
sealing with mixture of silt, cement and methacrylamide)
- IT 79-39-0, Methacrylamide  
(materials and procedure for soil stabilization by  
sealing with mixture of silt, cement and methacrylamide)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD (1 CITINGS)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L47 ANSWER 4 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:422058 HCAPLUS Full-text

DOCUMENT NUMBER: 138:405817

TITLE: Heat-resistant dispersants and their use as  
modifiers for excavation slurries or drilling muds

INVENTOR(S): Okitaka, Isao; Chen, Tien-ming

PATENT ASSIGNEE(S): Kohjin Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| -----                  | ---  | -----    | -----           | -----    |
| JP 2003159524          | A    | 20030603 | JP 2001-363017  | 20011128 |
|                        |      |          | <--             |          |
| PRIORITY APPLN. INFO.: |      |          | JP 2001-363017  | 20011128 |
|                        |      |          | <--             |          |

- ED Entered STN: 03 Jun 2003
- AB Heat-resistant dispersants, useful as modifiers for excavation slurries or  
drilling muds, petroleum recovery, etc., contain polymers containing  
hydroxyethyl(meth)acrylamide as a constituent unit. Thus, an excavation  
slurry (or drilling mud) containing 20 g bentonite, 600 g H<sub>2</sub>O, and 0.1 weight%  
poly(N-hydroxyethylacrylamide) showed 71% retention of viscosity and no  
hydrolysis after 5-h heating at 150°.
- IC ICM B01F017-22  
ICS B01F017-52; C08F020-58; C09K007-02
- CC 58-5 (Cement, Concrete, and Related Building Materials)  
Section cross-reference(s): 37, 51
- ST hydroxyethylacrylamide polymer dispersant excavation slurry modifier;  
drilling mud modifier dispersant hydroxyethylmethacrylamide  
polymer; heat resistance polyhydroxyethylacrylamide dispersant slurry  
bentonite
- IT Heat-resistant materials  
(dispersants; heat-resistant dispersants containing hydroxyethyl(  
meth)acrylamide polymers and their use as  
modifiers for excavation slurries or drilling muds)

IT Drilling fluids  
 Slurries  
 Soil stabilizing agents  
 (heat-resistant dispersants containing hydroxyethyl(meth)  
 acrylamide polymers and their use as modifiers for  
 excavation slurries or drilling muds)

IT Bentonite, uses  
 (heat-resistant dispersants containing hydroxyethyl(meth)  
 acrylamide polymers and their use as modifiers for  
 excavation slurries or drilling muds)

IT Dispersing agents  
 (heat-resistant; heat-resistant dispersants containing hydroxyethyl(  
 meth)acrylamide polymers and their use as  
 modifiers for excavation slurries or drilling muds)

IT 28156-60-7P, N-(Hydroxyethyl)acrylamide polymer  
 (heat-resistant dispersants containing hydroxyethyl(meth)  
 acrylamide polymers and their use as modifiers for  
 excavation slurries or drilling muds)

L47 ANSWER 5 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:96210 HCAPLUS Full-text

DOCUMENT NUMBER: 138:124126

TITLE: Deep impregnation of porous materials with  
 biocidal polymers

INVENTOR(S): Ottersbach, Peter; Sosna, Friedrich

PATENT ASSIGNEE(S): Creavis Gesellschaft Fuer Technologie Und  
 Innovation Mbh, Germany

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO.  | DATE       |
|--|------|----------|------------------|------------|
| -----  | ---- | -----    | -----            | -----      |
| EP 1281490   | A1   | 20030205 | EP 2002-13202    | 20020615   |
|  |      |          | <--              |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |      |          |                  |            |
| DE 10138407  | A1   | 20030227 | DE 2001-10138407 | 20010804   |
|  |      |          | <--              |            |
| US 20030026905   | A1   | 20030206 | US 2002-211373   | 20020805   |
|  |      |          | <--              |            |
| PRIORITY APPLN. INFO.:   |      |          | DE 2001-10138407 | A 20010804 |
|  |      |          | <--              |            |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 07 Feb 2003

AB In the title process, solns. or dispersions of biocidal polymers are applied  
 to the porous substrates and pressed at 2-100 bar. A block of sprucewood (40  
 + 40 + 300 mm) was immersed in a 5% solution of poly[N-[3-  
 (dimethylamino)propyl]methacrylamide] in aqueous EtOH (prepared by AIBN-  
 initiated polymerization) for 1 h at room temperature, heated in an autoclave  
 containing the same polymer solution at 40°/8 bar for 1 h, and dried at 30°/50  
 mbar. Activity of this wood against Staphylococcus aureas is exemplified.

IC ICM B27K003-08

ICS B27K003-15

CC 43-2 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 5, 58

ST biocidal polymer impregnation porous substrate; microbicidal polymer

impregnation porous substrate; wood impregnation biocidal polymer;  
~~dimethylaminopropylmethacrylamide~~ polymer biocidal  
 impregnation wood

IT Cement  
     Ceramics  
     Concrete  
     Impregnation  
     Mortar  
     Porous materials  
     Wood  
         (deep impregnation of porous materials with biocidal polymers)

IT 26716-20-1, 2-(tert-Butylamino)ethyl methacrylate homopolymer  
 64080-86-0, N-[3-(Dimethylamino)propyl]~~methacrylamide~~  
 homopolymer 328060-60-2, 3-Aminopropyl vinyl ether-methyl  
 methacrylate copolymer  
     (microbicidal; deep impregnation of porous materials with biocidal  
     polymers)

OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS  
 RECORD (3 CITINGS)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L47 ANSWER 6 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2002:465944 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:51096  
 TITLE: Method for using antimicrobial polymers for the  
 protection of buildings and monuments  
 INVENTOR(S): Ottersbach, Peter; Kossmann, Beate  
 PATENT ASSIGNEE(S): Creavis Gesellschaft fuer Technologie und  
 Innovation m.b.H., Germany  
 SOURCE: PCT Int. Appl., 18 pp.  
         CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 2002048070   | A1   | 20020620 | WO 2001-EP13093  | 20011113 |
| <--   |      |          |                  |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,<br>CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,<br>GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,<br>LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,<br>NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,<br>TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,<br>CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,<br>TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,<br>TD, TG |      |          |                  |          |
| DE 10062201   | A1   | 20020620 | DE 2000-10062201 | 20001213 |
| <--   |      |          |                  |          |
| AU 2002017023   | A    | 20020624 | AU 2002-17023    | 20011113 |
| <--   |      |          |                  |          |
| EP 1341740  | A1   | 20030910 | EP 2001-270508   | 20011113 |
| <--   |      |          |                  |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  |      |          |                  |          |

10/557,620

US 20040024082 A1 20040205 US 2003-450040 20030610

PRIORITY APPLN. INFO.: <--  
DE 2000-10062201 A 20001213 <--  
WO 2001-EP13093 W 20011113 <--

ED Entered STN: 21 Jun 2002

AB The method includes impregnating the surfaces with an antimicrobial polymer for the protection of buildings and monuments. The method is applicable to natural or artificial stone, concrete, wood, gypsum, glass, clay, cement, or ~~ceramics~~. The antimicrobial polymers are dissolved in an organic solvent or dispersed in an aqueous solution. The antimicrobial polymers are selected from methacrylic acid -2-t-butylaminoethyl ester, methacrylic acid-2-diethylamino Et ester, methacrylic acid-2-diethylamino Me ester, acrylic acid-2-tert-butylaminoethyl ester, acrylic acid-3-dimethylaminopropyl ester, acrylic acid-2-diethylaminoethyl ester, acrylic acid-2-dimethylaminoethyl ester, ~~dimethylaminopropylmethacrylamide, diethylaminopropylmethacrylamide~~, acrylic acid-3-dimethylaminopropylamide, 2-methacryloxyethyltrimethylammoniummethosulfate, methacrylic acid-2-diethylamino et ester, 2-methacryloxyethyl trimethylammonium chloride, 3-methacryldimaminopropyl trimethylammonium chloride, 2-acryloxyethyl-4-benzoyldimethylammoniumbromide, 2-Methacryloxyethyl-4-benzoyldimethylammoniumbromide, Allyltriphenylphosphoniumbromide, Allyltriphenylphosphoniumchloride, 2-Acrylamido-2-methyl-1-propanesulfonic acid, 2-Diethylaminoethyl vinyl ether, 3-Aminopropyl vinyl ether.

IC ICM C04B041-48

ICS B05D007-00; B27K003-50

CC 58-6 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 10, 38

ST antimicrobial polymer biocide protection building monument; concrete cement stone wood gypsum glass clay ~~ceramic~~

IT Bricks

Buildings

~~Ceramics~~

Concrete

Wood

(antimicrobial protection of; method for using antimicrobial polymers for protection of buildings and monuments)

IT 105-16-8, Methacrylic acid-2-diethylaminoethyl ester 1560-54-9, Allyltriphenylphosphoniumbromide 2426-54-2, Acrylic acid-2-diethylaminoethyl ester 2439-35-2, Acrylic acid-2-dimethylaminoethyl ester 3205-13-8, 2-Diethylaminoethyl vinyl ether 5039-78-1 5205-93-6 6891-44-7 14206-21-4, Acrylic acid-2-tert-butylaminoethyl ester 15214-89-8, 2-Acrylamido-2-methyl-1-propanesulfonic acid 18480-23-4, Allyltriphenylphosphoniumchloride 18526-07-3, Acrylic acid-3-dimethylaminopropyl ester 45017-37-6 51410-72-1 61630-72-6 66415-55-2, 3-Aminopropyl vinyl ether 67296-21-3, ~~Dimethylaminopropylmethacrylamide~~

(antimicrobial polymers; method for using antimicrobial polymers for protection of buildings and monuments)

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 7 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:465942 HCAPLUS Full-text

DOCUMENT NUMBER: 137:51090

TITLE: Polymer-modified groundwork materials

INVENTOR(S): Sandor, Mario; Dreher, Stefan; Pakusch, Joachim;

10/557,620

PATENT ASSIGNEE(S): Denu, Hans-Juergen  
 SOURCE: Basf Aktiengesellschaft, Germany  
 PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2002048068   | A1   | 20020620 | WO 2001-EP14740  | 20011214   |
| <--   |      |          |                  |            |
| W: CN, JP, US   |      |          |                  |            |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR    |      |          |                  |            |
| DE 10062657   | A1   | 20020620 | DE 2000-10062657 | 20001215   |
| <--   |      |          |                  |            |
| EP 1341733  | A1   | 20030910 | EP 2001-270506   | 20011214   |
| <--   |      |          |                  |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR |      |          |                  |            |
| JP 2004523605   | T    | 20040805 | JP 2002-549606   | 20011214   |
| <--   |      |          |                  |            |
| US 20040047694  | A1   | 20040311 | US 2003-450657   | 20030616   |
| <--   |      |          |                  |            |
| PRIORITY APPLN. INFO.:  |      |          | DE 2000-10062657 | A 20001215 |
|   |      |          | <--              |            |
|   |      |          | WO 2001-EP14740  | W 20011214 |
| <--   |      |          |                  |            |

ED Entered STN: 21 Jun 2002

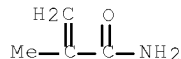
AB The polymer-modified groundwork materials containing (a) 100 weight parts of a mineral main constituent based on sand, crushed stones, and/or gravel and (b) 1-50 weight parts of at least one hydrophobic synthetic polymer in the form of a polymer powder dispersion that is uniformly distributed in the mineral constituent. The mineral component may also contain ≤20 weight parts of cement, clay, loam, and lime. The hydrophobic polymer is selected from methacrylic acid polymer, styrene-methacrylate copolymer, styrene-butadiene copolymer, and ethylene-vinylacetate copolymer. The invention also relates to a method for the production of said materials and to a method for the fortification of the ground.

IT 79-39-0, Methacrylamide

(polymer component; polymer-modified groundwork materials)

RN 79-39-0 HCAPLUS

CN 2-Propenamide, 2-methyl- (CA INDEX NAME)



IC ICM C04B026-04

ICS C09K017-20

CC 58-5 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38

ST soil stabilization polymer hydrophobic groundwork

cement clay lime

IT Cement

Gravel  
 (component of groundwork materials; polymer-modified groundwork materials)

IT Clays, uses  
 Lime (chemical)  
 (component of groundwork materials; polymer-modified groundwork materials)

IT Soils  
 (loamy, component of groundwork materials; polymer-modified groundwork materials)

IT Soil stabilization  
 (using polymer-modified mineral mixture; polymer-modified groundwork materials)

IT 79-39-0, Methacrylamide 107-13-1, Acrylonitrile, uses  
 (polymer component; polymer-modified groundwork materials)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 8 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:185033 HCAPLUS Full-text

DOCUMENT NUMBER: 136:251469

TITLE: Mold body with a mineral clay coating

INVENTOR(S): Sandor, Mario; Schwartz, Manfred; Schwartz, Manfred; Bechert, Bertold; Wiese, Harm

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE     |
|---|------|----------|------------------|----------|
| WO 2002020427   | A1   | 20020314 | WO 2001-EP10132  | 20010903 |
| <--   |      |          |                  |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |      |          |                  |          |
| DE 10043452   | A1   | 20020314 | DE 2000-10043452 | 20000904 |
| <--   |      |          |                  |          |
| AU 2001091819   | A5   | 20020322 | AU 2001-91819    | 20010903 |
| <--   |      |          |                  |          |
| EP 1315687  | A1   | 20030604 | EP 2001-971995   | 20010903 |
| <--   |      |          |                  |          |
| EP 1315687  | B1   | 20040818 |                  |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                  |          |
| AT 273942   | T    | 20040915 | AT 2001-971995   | 20010903 |



<--  
 NO 2003000986      A      20030303      NO 2003-986      20030303  
 <--  
 US 20040009362      A1      20040115      US 2003-362681      20030304  
 <--  
 PRIORITY APPLN. INFO.:      DE 2000-10043452      A      20000904  
 <--  
                                  WO 2001-EP10132      W      20010903  
 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 15 Mar 2002

AB The invention relates to a mold body, comprising a base body made from a cement-bonded mineral material which is modified, optionally, with polymers and a mineral coating made from a polymer-modified mineral material disposed on  $\geq 1$  main surface(s) of the base body, containing  $\geq 1$  clay mineral(s) as a major component and  $\geq 1$  hydrophobic, film-forming polymer(s) distributed in the mineral material.

IC ICM C04B041-50

ICS C04B041-48

CC 58-4 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38, 57

IT Construction materials

(ceramic; production of mold body with mineral clay coating for)

IT Ceramics

(construction materials; production of mold body with mineral clay coating for)

IT 27288-65-9, Acrylic acid-butyl acrylate-N-methylolmethacrylamide-styrene copolymer 31568-32-8, Acrylonitrile-butadiene-methacrylamide-styrene copolymer 107088-37-9, Acrylamide-acrylic acid-2-ethylhexyl acrylate-methacrylamide-styrene copolymer

(in production of mold body with mineral clay coating)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 9 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:185028 HCAPLUS Full-text

DOCUMENT NUMBER: 136:235856

TITLE: Polymer-modified clay mold body

INVENTOR(S): Sandor, Mario; Schwartz, Manfred; Bechert, Bertold; Pakusch, Joachim; Denu, Hans-Juergen; Knoefel, Dietbert; Boettger, Karl-Georg

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 26 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| -----         | ---- | -----    | -----           | -----    |
| WO 2002020422 | A1   | 20020314 | WO 2001-EP10133 | 20010903 |

<--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,

10/557,620

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
 LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
 NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,  
 TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,  
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
 TD, TG

|  |    |          |                  |            |
|--|----|----------|------------------|------------|
| DE 10043453  | A1 | 20020314 | DE 2000-10043453 | 20000904   |
|  |    |          | <--              |            |
| AU 2002012195  | A  | 20020322 | AU 2002-12195    | 20010903   |
|  |    |          | <--              |            |
| EP 1315685   | A1 | 20030604 | EP 2001-980323   | 20010903   |
|  |    |          | <--              |            |
| EP 1315685   | B1 | 20041208 |                  |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,<br>PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR |    |          |                  |            |
| JP 2004508266  | T  | 20040318 | JP 2002-525052   | 20010903   |
|  |    |          | <--              |            |
| US 20040087702   | A1 | 20040506 | US 2003-362516   | 20030303   |
|  |    |          | <--              |            |
| PRIORITY APPLN. INFO.:   |    |          | DE 2000-10043453 | A 20000904 |
|  |    |          | <--              |            |
|  |    |          | WO 2001-EP10133  | W 20010903 |
|  |    |          | <--              |            |

ED Entered STN: 15 Mar 2002

AB The invention relates to a mold body made from clay, comprising a mineral mass based on clay minerals as main component and  $\geq 1$  hydrophobic, film-forming polymer evenly distributed through the mold body.

IC ICM C04B026-04

ICS C04B014-10

CC 57-5 (Ceramics)

Section cross-reference(s): 38, 58

IT Construction materials

(ceramic; polymer-modified clay mold body for)

IT Ceramics

(construction materials; polymer-modified clay mold body for)

IT 27288-65-9, Acrylic acid-butyl acrylate-N-

~~methylolmethacrylamide~~-styrene copolymer 31568-32-8,

Acrylonitrile-butadiene-~~methacrylamide~~-styrene copolymer

107088-37-9, Acrylamide-acrylic acid-2-ethylhexyl acrylate-

~~methacrylamide~~-styrene copolymer

(in production of polymer-modified clay mold body)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L47 ANSWER 10 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:107403 HCAPLUS Full-text

DOCUMENT NUMBER: 136:151598

TITLE: Manufacture of water-soluble or water-swella-  
 ble copolymers containing sulfo groups as associative  
 thickeners for construction materials

INVENTOR(S): Schinabeck, Michael; Albrecht, Gerhard; Kern,  
 Alfred; Schuhbeck, Manfred; Melzer, Michaela

PATENT ASSIGNEE(S): Degussa Bauchemie G.m.b.H., Germany

SOURCE: PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO.  | DATE       |
|---|------|----------|------------------|------------|
| WO 2002010229   | A1   | 20020207 | WO 2001-EP8938   | 20010802   |
| <--   |      |          |                  |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW |      |          |                  |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                  |            |
| DE 10037629   | A1   | 20020214 | DE 2000-10037629 | 20000802   |
| <--   |      |          |                  |            |
| CA 2417421  | A1   | 20030130 | CA 2001-2417421  | 20010802   |
| <--   |      |          |                  |            |
| CA 2417421  | C    | 20090929 |                  |            |
| EP 1309634  | A1   | 20030514 | EP 2001-971853   | 20010802   |
| <--   |      |          |                  |            |
| EP 1309634  | B1   | 20061004 |                  |            |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |      |          |                  |            |
| JP 2004505127   | T    | 20040219 | JP 2002-515957   | 20010802   |
| <--   |      |          |                  |            |
| AT 341568   | T    | 20061015 | AT 2001-971853   | 20010802   |
| <--   |      |          |                  |            |
| ES 2269460  | T3   | 20070401 | ES 2001-971853   | 20010802   |
| <--   |      |          |                  |            |
| CZ 297813   | B6   | 20070404 | CZ 2003-578      | 20010802   |
| <--   |      |          |                  |            |
| US 20040024154  | A1   | 20040205 | US 2003-343102   | 20030711   |
| <--   |      |          |                  |            |
| US 7238760  | B2   | 20070703 |                  |            |
| PRIORITY APPLN. INFO.:  |      |          |                  |            |
|   |      |          | DE 2000-10037629 | A 20000802 |
| <--   |      |          |                  |            |
|   |      |          | WO 2001-EP8938   | W 20010802 |
| <--   |      |          |                  |            |

# ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 10 Feb 2002

AB H2O-soluble or H2O-swellaable copolymers which contain sulfo groups and are based on N-sulfoalkyl(meth)acrylamide derivs. and (meth)acrylamide or N-vinyl compds. (structures specified), useful as additives for aqueous construction materials or for water-thinned paints and coatings, were manufactured The inventive copolymers also represent H2O retention agents which are effective, even when used in relatively small quantities, and which are compatible in construction material and paint systems of this type. For example, a solid gel was obtained by radical polymerization of partially neutralized (pH 6.0) mixture of 2.17 mol 2-acrylamido-2-methylpropanesulfonic acid with N,N-dimethylacrylamide 0.83, (3-methacrylamidopropyl)trimethylammonium chloride 0.12 and Sipomer SEM 25 0.023 mol. The gel was dried, comminuted and added (0.16%) to a water-thinned ceramic tile adhesive to give H2O retention 99.1%, vs. 97.7 for a similar copolymer containing polyethylene glycol methacrylate Me ether instead of Sipomer SEM 25.

IC ICM C08F020-00  
ICS C08F220-00

CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 58

IT 395063-24-8P, 2-Acrylamido-2-methylpropanesulfonic acid-N,N-Dimethylacrylamide-(3-Methacrylamidopropyl)trimethylammonium chloride-Sipomer SEM 25 graft copolymer  
 395063-25-9P, Acrylamide-2-Acrylamido-2-methylpropanesulfonic acid-(3-Methacrylamidopropyl)trimethylammonium chloride-Sipomer SEM 25 graft copolymer  
 395063-26-0P, 2-Acrylamido-2-methylpropanesulfonic acid-3-(N,N-Dimethylaminopropyl)acrylamide-(3-Methacrylamidopropyl)trimethylammonium chloride-Sipomer SEM 25 graft copolymer  
 395063-27-1P, 2-Acrylamido-2-methylpropanesulfonic acid-N,N-Dimethylacrylamide-Dimethyldiallylammonium chloride-Sipomer SEM 25 copolymer  
 395063-28-2P, 2-Acrylamido-2-methylpropanesulfonic acid-3-(N,N-Dimethylaminopropyl)acrylamide-(3-Acrylamidopropyl)trimethylammonium chloride-Sipomer SEM 25 graft copolymer  
 395063-29-3P, 2-Acrylamido-2-methylpropanesulfonic acid-N,N-Dimethylacrylamide-Dimethyldiallylammonium chloride-Sipomer BEM copolymer  
 395064-83-2P, 2-Acrylamido-2-methylpropanesulfonic acid-N,N-dimethylacrylamide-(3-methacrylamidopropyl)trimethylammonium chloride-ethylene oxide graft copolymer ether with 2,4,6-tristyrylphenol  
 395064-85-4P, 2-Acrylamido-2-methylpropanesulfonic acid-acrylamide-(3-methacrylamidopropyl)trimethylammonium chloride-ethylene oxide graft copolymer ether with 2,4,6-tristyrylphenol  
 395064-87-6P, 2-Acrylamido-2-methylpropanesulfonic acid-(N,N-dimethylaminopropyl)acrylamide-(3-methacrylamidopropyl)trimethylammonium chloride-ethylene oxide graft copolymer ether with 2,4,6-tristyrylphenol  
 395064-89-8P, 2-Acrylamido-2-methylpropanesulfonic acid-3-(N,N-dimethylaminopropyl)acrylamide-(3-acrylamidopropyl)trimethylammonium chloride-ethylene oxide graft copolymer ether with 2,4,6-tristyrylphenol  
 (manufacture of water-soluble or -swellable copolymers containing sulfo groups  
 as associative thickeners for construction materials)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 11 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:84169 HCAPLUS Full-text

DOCUMENT NUMBER: 136:137291

TITLE: Polymeric inhibitor for prevention of earth deposits in excavation engineering works

INVENTOR(S): Akioka, Yukihiro; Hagiwara, Hideo; Fujikake, Masato; Fujimoto, Nobutaka; Fujimoto, Kenji; Konishiike, Takeshi; Yagyu, Satoru; Imamura, Yukari; Okada, Takao

PATENT ASSIGNEE(S): Nisshin Kogyo K. K., Japan; Komatsu IM Engineering K. K.; Sumitomo Seika Chemicals Co., Ltd.; Taki Chemical Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

10/557,620

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| JP 2002030282          | A    | 20020131 | JP 2000-218793  | 20000719 |
| PRIORITY APPLN. INFO.: |      |          | JP 2000-218793  | 20000719 |

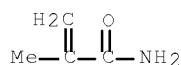
ED Entered STN: 31 Jan 2002

AB The inhibitor comprises copolymer of (meta)acrylamide and (meta)acrylic acid (or its salt) dispersed in aqueous solution of inorg. salt, to improve wettability in excavation works.

IT ~~79-39-0~~, (Meth)acrylamide  
(polymeric inhibitor for prevention of earth deposits in excavation engineering works)

RN 79-39-0 HCAPLUS

CN 2-Propenamide, 2-methyl- (CA INDEX NAME)



IC ICM C09K007-02  
ICS C09K007-00; C09K017-22; E21D009-06; B01D021-01; C02F001-56; C09K103-00; C09K109-00

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)  
Section cross-reference(s): 58

IT Earth  
Hydraulic fluids  
Soils  
Wettability  
(polymeric inhibitor for prevention of earth deposits in excavation engineering works)

IT 79-06-1, Acrylamide, uses 79-10-7, Acrylic acid, uses  
~~79-39-0~~, (Meth)acrylamide 79-41-4, (Meth)acrylic acid, uses  
(polymeric inhibitor for prevention of earth deposits in excavation engineering works)

L47 ANSWER 12 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:78192 HCAPLUS Full-text

DOCUMENT NUMBER: 134:136439

TITLE: Low molecular weight water soluble polymer composition and method of use

INVENTOR(S): Matz, Gary F.; Melby, Allan L.; Chen, Shih-Ruey T.; Vozza, Nicholas F.

PATENT ASSIGNEE(S): Calgon Corporation, USA

SOURCE: PCT Int. Appl., 41 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE     |
|--|------|----------|-----------------|----------|
| WO 2001006999  | A1   | 20010201 | WO 2000-US15343 | 20000602 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, |      |          |                 |          |

HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL,  
 PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,  
 UG, UZ, VN, YU, ZA, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH,  
 CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 AU 2000054619 A 20010213 AU 2000-54619 20000602  
 <--  
 EP 1196130 A1 20020417 EP 2000-939545 20000602  
 <--  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,  
 PT, IE, SI, LT, LV, FI, RO  
 JP 2003505553 T 20030212 JP 2001-511887 20000602  
 <--  
 PRIORITY APPLN. INFO.: US 1999-145683P P 19990726  
 <--  
 WO 2000-US15343 W 20000602  
 <--  
 ED Entered STN: 02 Feb 2001  
 AB Novel low-mol.-weight ampholytic water-soluble polymers are disclosed  
 containing quaternary ammonium monomers, (meth)acrylic acid or 2-(meth)  
 acrylamido-2-methylpropane sulfonic acid, and optionally a C1-C22 alkyl  
 (meth)acrylate acrylamide or methacrylamide. The ampholytic polymers are  
 useful in hair, skin and nail conditioning, paper coating, and subterranean  
 well drilling and well cementing operations. For example, a polyelectrolyte  
 was prepared containing acrylic acid 6.96, methacrylamidopropyltrimethyl  
 chloride (MAPTAC) 42.67, and Me acrylate 1.70%, resp., the difference being  
 water, Na persulfate, NaHSO<sub>3</sub>, H<sub>2</sub>O<sub>2</sub>, and NaOH. The polymer prepared was used  
 in a hair dye lotion, a clay-based gypsum drilling mud, and a cementing  
 composition  
 IC ICM A61K007-06  
 ICS C08F030-02; C08F228-02; C09K007-02  
 CC 62-1 (Essential Oils and Cosmetics)  
 Section cross-reference(s): 43, 58  
 IT Bentonite, uses  
 (low-mol.-weight water-soluble polymer composition for cosmetics, paper  
 coatings and well drilling and cementing)  
 OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
 RECORD (3 CITINGS)  
 REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT  
  
 L47 ANSWER 13 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 1999:603605 HCAPLUS Full-text  
 DOCUMENT NUMBER: 131:244682  
 TITLE: Water leakage inhibitor and water leakage  
 prevention method  
 INVENTOR(S): Maehara, Kiyoshi; Ito, Yuji; Ogawa, Masanobu;  
 Iguchi, Tsutomu  
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

AB The inhibitor comprises a 1st liquid comprising a surfactant, a water-absorbing polymer and water and a 2nd liquid comprising the surfactant, water and a water-insol. powder, wherein the 1st liquid, 2nd liquid and water are successively applied on a target position. Thus, an inhibitor for sealing of leakage on roofing was made from the 1st liquid of Na stearate (I) 15, Panakayaku F 10 and water 2000 g and the 2nd liquid of I 5, Super Ben 70 and water 2000 g.

(water leakage inhibitor and water leakage prevention method)

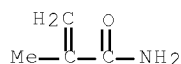
RN 25014-12-4 HCAPLUS

CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 79-39-0

CMF C4 H7 N O



IC ICM C09K003-10

ICS C09K003-10; C08K007-00; C08L101-14

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 58

ST sodium polyacrylate bentonite water leakage inhibitor;  
leakage prevention inhibitor sodium stearate; hygroscopic substance  
water leakage prevention

IT Alkaline earth salts

Bentonite, uses

(water leakage inhibitor and water leakage prevention method)

IT 5202-78-8D, N-Vinylacetamide, derivs. 5202-78-8D, N-Vinylacetamide, derivs. 9002-89-5D, Poly(vinyl alcohol), derivs. 9003-04-7, Panakayaku F 9003-05-8, Polyacrylamide 9004-32-4, Sodium carboxymethylcellulose 9004-34-6D, Cellulose, derivs., uses 9004-64-2, Hydroxypropylcellulose 9004-67-5, Methylcellulose 9005-25-8D, Starch, derivs., uses 9005-32-7, Alginic acid 9005-32-7D, Alginic acid, derivs. 9005-36-1, Potassium alginate 9005-37-2, Propylene glycol alginate 9005-38-3, Sodium alginate 25014-12-4, Polymethacrylamide 53241-15-9, Sodium starch phosphate 54193-36-1, Poly(methacrylic acid) sodium salt (water leakage inhibitor and water leakage prevention method)

L47 ANSWER 14 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1999:439796 HCAPLUS Full-text

DOCUMENT NUMBER: 131:89169

TITLE: Water leakage prevention compositions for concrete buildings

INVENTOR(S): Maehara, Kiyoshi; Ito, Yuji; Ogawa, Masanobu;  
Iquchi, Tsutomu

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan

10/557,620

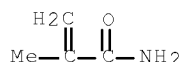
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------|------|----------|-----------------|----------|
| JP 11190133 | A    | 19990713 | JP 1997-366892  | 19971226 |

PRIORITY APPLN. INFO.: JP 1997-366892 19971226  
 <--

ED Entered STN: 19 Jul 1999  
 AB The title compns. comprise (a) surfactants (e.g., Na stearate, Emal 10 powder, Na oleate), (b) highly water-absorbing polymers [e.g., Panakayaku F, Na alginate, Na CM-cellulose, poly(Na methacrylate), polyacrylamide, polymethacrylamide, alginic acid, K alginate, propylene glycol alginate, starch, Na starch glycolate, Na starch phosphate, methylcellulose, hydroxypropyl cellulose], (c) gelating agents of the polymers (e.g., Kunipia F, Smecton, Ca acetate, Bentonite), and (d) water.  
 IT 25014-12-4, Polymethacrylamide  
 (water absorbents; water leakage prevention compns. for concrete buildings)  
 RN 25014-12-4 HCAPLUS  
 CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1  
 CRN 79-39-0  
 CMF C4 H7 N O



IC ICM E04G023-02  
 ICS C09K003-10  
 CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 53  
 IT Alkaline earth salts  
 Alums  
 Bentonite, uses  
 Silicates, uses  
 Smectite-group minerals  
 (gelating agents; water leakage prevention compns. for concrete buildings)  
 IT 9003-04-7, Panakayaku F 9004-32-4, Sodium carboxymethyl cellulose  
 9004-64-2, Hydroxypropyl cellulose 9004-67-5, Methylcellulose  
 9005-25-8, Starch, uses 9005-32-7, Alginic acid 9005-36-1,  
 Potassium alginate 9005-37-2, Propylene glycol alginate 9005-38-3,  
 Sodium alginate 9063-38-1, Sodium starch glycolate  
 25014-12-4, Polymethacrylamide 25086-62-8,  
 Poly(sodium methacrylate) 53241-15-9, Sodium starch phosphate  
 (water absorbents; water leakage prevention compns. for concrete buildings)  
 OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS



## RECORD (1 CITINGS)

L47 ANSWER 15 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1997:765428 HCAPLUS Full-text

DOCUMENT NUMBER: 128:92189

ORIGINAL REFERENCE NO.: 128:17956h,17957a

TITLE: Stabilizing fluids for ground excavation

INVENTOR(S): Takahashi, Hideo; Harada, Eikichi; Oi, Jinichi;  
Narusawa, Noboru

PATENT ASSIGNEE(S): Telnite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.  | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------|------|----------|-----------------|----------|
| JP 09310069 | A    | 19971202 | JP 1996-125252  | 19960521 |

&lt;--

PRIORITY APPLN. INFO.: JP 1996-125252 19960521

&lt;--

ED Entered STN: 08 Dec 1997

AB The fluid contains (A) anionic (~~meth~~)acrylamide copolymer powders (number-average mol. weight  $\geq 3,000,000$ ; 35-mesh fraction content  $\geq 80\%$ ) and (B)  $\geq 1$  powders selected from inorg. alkali metal compds., inorg. alkaline earth metal compds., zeolites, and clay minerals. Preferably, the fluid further contain powdered carboxymethyl cellulose Na salt.

IC ICM C09K017-40

ICS C09K007-00; C09K103-00

CC 58-5 (~~Cement~~, Concrete, and Related Building Materials)IT ~~Bentonite~~, uses

(Kunigel V 2; stabilizing fluids containing anionic acrylamide polymer powders for ground excavation)

L47 ANSWER 16 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:584006 HCAPLUS Full-text

DOCUMENT NUMBER: 125:225310

ORIGINAL REFERENCE NO.: 125:42057a,42060a

TITLE: Manufacture of gas-permeable agglomerates capable of absorbing and retaining liquid

INVENTOR(S): Schlueter, Bernd

PATENT ASSIGNEE(S): Huels Aktiengesellschaft, Germany

SOURCE: Eur. Pat. Appl., 6 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| EP 726305  | A1   | 19960814 | EP 1995-120214  | 19951220 |

&lt;--

EP 726305 B1 19991103

R: AT, CH, DE, IT, LI

DE 19504529 A1 19960814 DE 1995-19504529 19950211

&lt;--

AT 186322 T 19991115 AT 1995-120214 19951220

PRIORITY APPLN. INFO.: <--  
 DE 1995-19504529 A 19950211  
 <--

ED Entered STN: 02 Oct 1996

AB The agglomerates, essentially containing (A) mineral carrier material 100, (B) liquid-absorbing and -retaining water-insol. polymeric material 0.05-35, and (C) adhesive 0.1-7.5 weight parts, are manufactured by preparing a concentrate by mixing part of A with the entire amount of B and C, and, after setting of the adhesive, mixing the concentrate with the remainder of A. Crushed clay tiles (carrier material) 100, were mixed in 2 stages with Terravest K 0.31 (adhesive) and Stockosorb 400F (acrylic acid-acrylamide copolymer; synthetic superabsorber) 0.24 weight parts. The agglomerates may contain bacteria, mycorrhizal fungi, herbicides, pesticides, fungi cultures, natural and synthetic fertilizer, nutrients, and pH-control agents.

IT 25014-12-4, Polymethacrylamide

(absorbent polymer; gas-permeable, liquid-absorbing agglomerate manufacture from gas-permeable mineral carrier material and adhesive and)

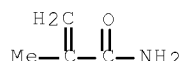
RN 25014-12-4 HCAPLUS

CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 79-39-0

CMF C4 H7 N O



IC ICM C09K017-40

CC 47-10 (Apparatus and Plant Equipment)  
 Section cross-reference(s): 19, 58, 63

IT Clays, uses

(Lecadan T, expanded, carrier material; gas-permeable, liquid-absorbing agglomerate manufacture from water-insol. absorbent polymer and adhesive and)

IT Bentonite, uses

Lava

Perlite

Pumice

(carrier material; gas-permeable, liquid-absorbing agglomerate manufacture from water-insol. absorbent polymer and adhesive and)

IT Tiles

(ceramic, recycled, carrier material; gas-permeable, liquid-absorbing agglomerate manufacture from water-insol. absorbent polymer and adhesive and)

IT 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide  
 25014-12-4, Polymethacrylamide 25087-26-7,  
 Polymethacrylic acid

(absorbent polymer; gas-permeable, liquid-absorbing agglomerate manufacture from gas-permeable mineral carrier material and adhesive and)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS  
 RECORD (2 CITINGS)

L47 ANSWER 17 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

10/557,620

ACCESSION NUMBER: 1995:95346 HCAPLUS Full-text  
 DOCUMENT NUMBER: 122:33292  
 ORIGINAL REFERENCE NO.: 122:6523a,6526a  
 TITLE: Soil injection agents and injection process  
 INVENTOR(S): Iijima, Shigeru; Shimomura, Tadaaki  
 PATENT ASSIGNEE(S): Dai Ichi Kogyo Seiyaku Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| JP 06184535            | A    | 19940705 | JP 1992-275230  | 19920917 |
|                        |      |          | <--             |          |
| PRIORITY APPLN. INFO.: |      |          | JP 1992-275230  | 19920917 |
|                        |      |          | <--             |          |

ED Entered STN: 08 Nov 1994

AB The injection agents contain acrylic polymers with intrinsic viscosity ( $\eta$ ) 0.1-2.0 dL/g and optionally organic dispersing agents and are blended as builders with inorg. soil-stabilizing agents and injected into ground. Thus, an aqueous mixture of cement 450, bentonite 50, and polymethacrylamide ( $\eta$  0.55) 0.9 part showed bleeding (JSCE-1986) 2.0% after 20 h and viscosity (JSCE-1986) 10.0 s initially, 11.2 after 1 h, and 16.6 after 2 h.

IT 25014-12-4, Polymethacrylamide  
 (soil stabilization agents containing acrylic polymers with improved bleeding resistance)

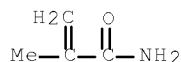
RN 25014-12-4 HCAPLUS

CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 79-39-0

CMF C4 H7 N O



IC ICM C09K017-00

ICS E02D003-12

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 58

ST cement builder acrylic polymer antibleeding;  
 polymethacrylamide cement soil  
 stabilization

IT Clays, uses

(SAM; soil stabilization agents containing acrylic polymers with improved bleeding resistance)

IT Cement

Soil stabilization

(soil stabilization agents containing acrylic polymers with improved bleeding resistance)

IT ~~Bentonite~~, uses  
 (soil stabilization agents containing acrylic polymers with improved bleeding resistance)

IT 8061-51-6, Sodium ligninsulfonate 9084-06-4, Formaldehyde-naphthalenesulfonic acid copolymer sodium salt 64787-97-9  
 (dispersants; soil stabilization agents containing acrylic polymers with improved bleeding resistance)

IT 9003-05-8, Polyacrylamide 24991-37-5, Acrylamide-sodium methacrylate copolymer 25014-12-4, Polymethacrylamide 25085-02-3, Acrylamide-sodium acrylate copolymer 27924-64-7, Acrylamide-methyl acrylate copolymer 28599-85-1, Methyl acrylate-sodium acrylate copolymer 30425-01-5 37100-07-5 38193-60-1 51032-63-4, Methyl methacrylate-sodium acrylate copolymer 53845-61-7 87431-09-2 159830-56-5  
 (soil stabilization agents containing acrylic polymers with improved bleeding resistance)

L47 ANSWER 18 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:305826 HCAPLUS Full-text

DOCUMENT NUMBER: 120:305826

ORIGINAL REFERENCE NO.: 120:53689a,53692a

TITLE: Fire-resistant glass and its manufacture

INVENTOR(S): Itoh, Hiroshi; Abe, Takashi; Yamashita, Hitoshi; Yoshimura, Toshihiro; Hisanaga, Takeshi

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan; Central Glass Co., Ltd.

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE        |
|------------------------|------|----------|-----------------|-------------|
| EP 590978              | A1   | 19940406 | EP 1993-307761  | 19930930    |
|                        |      |          | <--             |             |
| EP 590978              | B1   | 19980204 |                 |             |
| R: DE, FR, GB          |      |          |                 |             |
| JP 06115978            | A    | 19940426 | JP 1992-261888  | 19920930    |
|                        |      |          | <--             |             |
| JP 3169148             | B2   | 20010521 |                 |             |
| US 5437902             | A    | 19950801 | US 1993-128709  | 19930930    |
|                        |      |          | <--             |             |
| US 5653839             | A    | 19970805 | US 1995-415985  | 19950404    |
|                        |      |          | <--             |             |
| PRIORITY APPLN. INFO.: |      |          | JP 1992-261888  | A 19920930  |
|                        |      |          | <--             |             |
|                        |      |          | US 1993-128709  | A3 19930930 |
|                        |      |          | <--             |             |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 11 Jun 1994

AB The fire-resistant glass comprises (a)  $\geq 2$  plate-shaped vitreous materials arranged parallel and apart with the confronting faces treated with a silane coupling agent, (b) a spacer affixed between the plate-shaped vitreous materials at their peripheries via an adhesive, (c) a sealing agent adhered to the outer surface of the spacer, and (d) an aqueous gel in the space formed by the plate-shaped vitreous materials and the spacer; the aqueous gel comprises a polymer of a particular ~~(meth) acrylamide~~ derivative, a particulate metal

oxide, an aqueous medium, and an antifreezing agent. . This glass structure has excellent fire-resistance, is stable over a long period of time and is not susceptible to deterioration.

IC ICM B32B017-10  
ICS C03C027-12; C09K021-14; C08J003-03  
CC 57-1 (Ceramics)  
Section cross-reference(s): 58  
IT Ceramic materials and wares  
Glass fibers, uses  
(wool, fire-resistant multilayer glass for)  
OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS  
RECORD (9 CITINGS)

L47 ANSWER 19 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1992:577132 HCAPLUS Full-text  
DOCUMENT NUMBER: 117:177132  
ORIGINAL REFERENCE NO.: 117:30513a,30516a  
TITLE: Soil-stabilizing agents  
INVENTOR(S): Okada, Shigeru; Nakase, Tetsuo  
PATENT ASSIGNEE(S): Sanyo Chemical Industries Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| JP 04103689            | A    | 19920406 | JP 1990-222306  | 19900822 |
|                        |      |          | <--             |          |
| JP 07047734            | B    | 19950524 |                 |          |
| PRIORITY APPLN. INFO.: |      |          | JP 1990-222306  | 19900822 |
|                        |      |          | <--             |          |

ED Entered STN: 01 Nov 1992

AB The agents comprise a water-soluble polymer that increases the viscosity of water, a powdered ~~phyllosilicate~~ minerals, and optionally a surfactant. The polymer may be cellulose derivs., (~~meth~~) acrylamide (co)polymer, polycarboxylic acids, or their alkali metal or NH<sub>4</sub><sup>+</sup> salts; the mineral may be montmorillonite, mica, pyrophyllite, or agalmatolite having a 2:1-type structure, and the surfactant may be anionic and/or nonionic.

IC ICM C09K017-00  
CC 58-5 (~~Cement~~, Concrete, and Related Building Materials)  
ST soil stabilizing polymer ~~phyllosilicate~~ mineral; surfactant  
soil stabilizing agent  
IT Soil stabilization  
(agents, from water-soluble polymers and ~~phyllosilicate~~ minerals)  
IT Bentonite, uses  
(calcian, soil-stabilizing agents from water-soluble polymers and)  
IT Fatty acids, compounds  
(lanolin, reaction products, with aminopropyl Et dimethylammonium Et sulfate, soil-stabilizing agents containing, polymer-~~phyllosilicate~~ mineral)  
IT Bentonite, uses  
(sodian, soil-stabilizing agents from water-soluble polymers and)  
IT 9003-05-8, Polyacrylamide 9004-67-5, Methyl cellulose 25085-02-3  
(soil-stabilizing agents from ~~phyllosilicate~~ minerals and)  
IT 9004-82-4 9016-45-9 66091-25-6D, N-lanolin acyl derivs.

(surfactant, soil-stabilizing agents containing, polymer-  
phyllosilicate mineral)

L47 ANSWER 20 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1987:8806 HCAPLUS Full-text

DOCUMENT NUMBER: 106:8806

ORIGINAL REFERENCE NO.: 106:1497a,1500a

TITLE: Clay mineral-containing gels with  
stabilized structure and reversible water  
absorption ability

INVENTOR(S): Libor, Oszkar; Nagy, Gabor; Szekely, Tamas

PATENT ASSIGNEE(S): Magyar Tudomanyos Akademia, Termesztudomanyi  
Kutato Laboratoriumai, Hung.

SOURCE: U.S., 6 pp.  
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE       |
|------------------------|------|----------|-----------------|------------|
| -----                  | ---- | -----    | -----           | -----      |
| US 4600744             | A    | 19860715 | US 1984-664843  | 19841025   |
|                        |      |          | <--             |            |
| HU 186325              | B    | 19850729 | HU 1983-1680    | 19830515   |
|                        |      |          | <--             |            |
| PRIORITY APPLN. INFO.: |      |          | HU 1983-1680    | A 19830515 |
|                        |      |          | <--             |            |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 11 Jan 1987

AB Reacting a thixotropic clay mineral with a water-soluble organic polymer, e.g., a polyacrylamide, gives a mineral-containing gel having a stabilized structure and reversible water absorption ability, which is useful, e.g. as waterproofing material or soil-stabilizing agent. An aqueous suspension containing 6% F1 activated bentonite was mixed with quartz powder 10, asbestos wool 2, dry Na cellulose 3, and cement powder 4%, and the resulting suspension was mixed with hydrolyzed polyacrylamide (hydrolysis d. 40%) in a 5:2 ratio to provide a filler-containing gel with compressive strength 2-3 times that of the unfilled gel.

IT 25014-12-4D, Polymethacrylamide, hydrolyzed,  
reaction products with bentonite  
(gels, for waterproofing or soil stabilization)

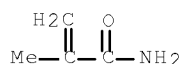
RN 25014-12-4 HCAPLUS

CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 79-39-0

CMF C4 H7 N O



IC ICM C08K003-34

INCL 524446000

CC 58-5 (Cement, Concrete, and Related Building Materials)

ST waterproofing material nonthixotropic clay gel; soil stabilizer nonthixotropic clay gel; polyacrylamide clay adduct gel; bentonite polyacrylamide reaction product gel; water clay gel absorbent reversible

IT Cement  
Asbestos  
(gels of acrylamide-bentonite reaction products containing, for waterproofing or soil stabilization)

IT Soil stabilization  
Waterproofing  
(agents, gels, clay mineral-polymer reaction products)

IT Bentonite, compounds  
Clay minerals  
(reaction products, with polymers, gels, for waterproofing or soil stabilization)

IT 9069-34-5, Sodium cellulose  
(gels of acrylamide-bentonite reaction products containing, for waterproofing or soil stabilization)

IT 79-41-4D, Methacrylic acid, copolymer with methacrylic acid derivs., hydrolyzed, reaction products with bentonite 9003-05-8D, Polyacrylamide, reaction products with clay minerals 9003-06-9D, Acrylamide-acrylic acid copolymer, reaction products with bentonite 24980-58-3D, Acrylic acid-vinyl acetate copolymer, hydrolyzed, reaction products with bentonite 25014-12-4D, Polymethacrylamide, hydrolyzed, reaction products with bentonite 27555-75-5D, Acrylamide-maleic anhydride copolymer, reaction products with bentonite  
(gels, for waterproofing or soil stabilization)

IT 14808-60-7, Quartz, uses and miscellaneous  
(powder, gels of acrylamide-bentonite reaction products containing, for waterproofing or soil stabilization)

OS.CITING REF COUNT: 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 21 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1986:151866 HCAPLUS Full-text

DOCUMENT NUMBER: 104:151866

ORIGINAL REFERENCE NO.: 104:24023a,24026a

TITLE: Clay-containing gels

INVENTOR(S): Libor, Oszkar; Nagy, Gabor; Szekely, Tamas

PATENT ASSIGNEE(S): Magyar Tudomanyos Akademia, Termeszettudomanyi Kutato Laboratoriumai, Hung.

SOURCE: Eur. Pat. Appl., 23 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
| -----      | ---  | -----    | -----           | -----    |
| EP 172938  | A2   | 19860305 | EP 1984-113274  | 19841105 |
|            |      |          | <--             |          |
| EP 172938  | A3   | 19880330 |                 |          |

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE

PRIORITY APPLN. INFO.: HU 1984-14568 A 19840806

&lt;--

ED Entered STN: 03 May 1986

AB Clay-containing gels of stable structure and reversible water-adsorption ability are manufactured by mixing an aqueous clay suspension with an aqueous solution of water-soluble polymer, e.g., a polyacrylamide, to increase the resistance of medium of the suspension 10- to 60-fold. The resulting gels are water-insol., adsorb water reversibly, and do not show syneresis. Thus, a 6 weight% aqueous suspension of activated bentonite (type F1).was mixed in a 4:1 volume ratio with a 0.2 weight% aqueous solution of polyacrylamide (average mol. weight 10,000,000), and the mixture was spray dried to give a fine xerogel powder with average particle size 20  $\mu$ . The drying temperature was <90°. Alternatively, the clay suspension and polyacrylamide solution described were sprayed simultaneously onto the surface of freshly built storm banks subject to heavy erosion. The gel stabilized the bank without interfering with plant growth. These materials can also be used as waterproofing materials, for environment-proofing of waste containers, as water-retention soil additives, and for fire extinguishing.

IT 25014-12-4D, hydrolyzed  
(clay gels containing, as adsorbents for waterproofing and soil stabilization and fire extinguishers)

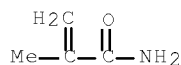
RN 25014-12-4 HCAPLUS

CN 2-Propenamide, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 79-39-0

CMF C4 H7 N O



IC ICM C04B033-02

CC 49-11 (Industrial Inorganic Chemicals)  
Section cross-reference(s): 50, 58

ST clay polymer gel waterproofing; soil additive  
clay polymer gel

IT Soil stabilization  
Waterproofing  
(clay-containing adsorbent gels for)

IT Adsorbents  
(clay-containing gels, with water-soluble polymers, for waterproofing and soil stabilization and fire extinguishers)

IT Cement  
Asbestos  
(filler, in clay-containing adsorbent gels for waterproofing and soil stabilization and fire extinguishers)

IT Bentonite, uses and miscellaneous  
Clays, uses and miscellaneous  
(gels containing, with water-soluble polymers, as adsorbents)

IT Silicates, uses and miscellaneous  
(swellable chain-type, gels containing, with water-soluble polymers, as adsorbents for waterproofing and soil stabilization and fire extinguishers)

IT Fire  
(extinguishers, clay-containing adsorbent gels for)



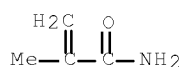
IT 9003-05-8 9003-05-8D, hydrolyzed 9003-06-9 ~~25014-12-4D~~  
, hydrolyzed 25086-15-1D, hydrolyzed 25322-68-3 27555-75-5  
(clay gels containing, as adsorbents for waterproofing and  
soil stabilization and fire extinguishers)  
IT 24980-58-3D, hydrolyzed  
(clay gels containing, as sorbents for waterproofing and  
soil stabilization and fire extinguishers)  
IT 9069-34-5  
(filler in clay-containing adsorbent gels for waterproofing  
and soil stabilization and fire extinguishers)  
IT 14808-60-7, uses and miscellaneous  
(filler, in clay-containing adsorbent gels for waterproofing  
and soil stabilization and fire extinguishers)  
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
RECORD (1 CITINGS)

L47 ANSWER 22 OF 44 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1962:36809 HCAPLUS  
DOCUMENT NUMBER: 56:36809  
ORIGINAL REFERENCE NO.: 56:6916f  
TITLE: Texture-forming agents for soils  
INVENTOR(S): Shtatnov, V. I.; Shcherbakova, N. I.  
SOURCE From: Byull. Izobretenii 1961, No. 13, 43..  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE  |
|------------|------|----------|-----------------|-------|
| -----      | ---- | -----    | -----           | ----- |
| SU 139433  |      | 19600607 | SU              |       |

&lt;--

ED Entered STN: 22 Apr 2001  
AB Polyacrylamide and Me acrylate-methacrylamide copolymer are mixed with clay or  
with powdered red bricks.  
IT 79-39-0, Methacrylamide, polymers with methacrylate  
(in soil stabilization)  
RN 79-39-0 HCAPLUS  
CN 2-Propenamide, 2-methyl- (CA INDEX NAME)



CC 16 (Cement and Concrete Products)  
IT Soils  
(consolidation, by polymer mixts. with clay or powdered  
bricks)  
IT Bricks  
(soil stabilization by polymer mixture with powdered)  
IT Clays  
(soil stabilization by polymers and)  
IT 79-39-0, Methacrylamide, polymers with methacrylate  
(in soil stabilization)  
IT 9003-05-8, Acrylamide, homopolymer  
(soil stabilization by Me acrylate-methacrylamide  
polymers and clay or powdered bricks, and)  
IT 30425-01-5D, 2-Propenoic acid, methyl ester, polymer with

2-methyl-2-propenamide, cyclic acetals  
 (soil stabilization by polyacrylamide and clay  
 or powdered bricks and)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS  
 RECORD (1 CITINGS)

=> d 23-33 full

L47 ANSWER 23 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 AN 2005-112356 [12] WPIX Full-text  
 DNC C2005-037581 [12]  
 TI Production of silanized composite filler useful for preparing  
 composite material e.g. in paint or dental cement involves  
 treating filler core material with silane coupling agent in the  
 presence of treatment medium comprising carbon dioxide  
 DC A18; A28; A97; E19; G02; L01  
 IN KARTHAEUSER J  
 PA (NANO-N) NANON AS  
 CYC 107  
 PI WO 2005002530 A1 20050113 (200512)\* EN 36[0]  
 EP 1641425 A1 20060405 (200624) EN  
 ADT WO 2005002530 A1 WO 2004-DK475 20040702; EP 1641425 A1 EP 2004-738972  
 20040702; EP 1641425 A1 WO 2004-DK475 20040702  
 FDT EP 1641425 A1 Based on WO 2005002530 A  
 PRAI DK 2003-1028 20030704  
 IPCI A61K0006-083 [I,A]; C03C0017-30 [I,A]  
 IPCR A61K0006-02 [I,C]; A61K0006-083 [I,A]; C03C0017-28 [I,C]; C03C0017-30  
 [I,A]; C03C0025-24 [I,C]; C03C0025-40 [I,A]  
 EPC A61K0006-083D; C03C0017-30; C03C0025-40  
 AB WO 2005002530 A1 UPAB: 20050708

NOVELTY - Producing a silanized composite filler involves treating a filler  
 core material (a) with a silane coupling agent (b) in the presence of a  
 treatment medium comprising carbon dioxide.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for Producing  
 (P1) a composite material involving mixing the filler with an optionally  
 curable composite matrix material (M1) to provide either composite material  
 with increased filler-matrix adhesion due to increased chemical compatibility  
 or a precursor composite material; and curing by temperature or radiation.

USE - For producing a composite material for use in the industrial,  
 automotive, aviation and aerospace sector, such as parts which can be produced  
 by injection molding, extrusion, calendaring or molding; dental cement; and  
 paint (claimed).

ADVANTAGE - The method is simple to use, recyclable and inexpensive and  
 good or even improved bonding between filler and composite material is  
 obtained.

TECH ORGANIC CHEMISTRY - Preferred Method: (a) Is subjected to a cleaning  
 step prior to the silane treatment step. The cleaning step preferably  
 comprising the step of subjecting the filler core material to a  
 cleaning medium comprising CO<sub>2</sub>. The cleaning medium and the treatment  
 medium have equal composition. The silane treated filler core material  
 is subjected to an impregnating step comprising depositing additional  
 components (preferably at least one impregnating component (C1) in the  
 form of organic components, such as polymer or polymer precursors  
 including monomers, dimers and oligomers) to the silane treated filler  
 core material. The impregnating components preferably are added from  
 an impregnating medium comprising CO<sub>2</sub>. The silane treated filler core  
 material is subjected to a curing step for additional curing of the  
 silane coating and optional impregnation of the coating, the curing  
 step (preferably subjecting the silane treated filler core material to

increased temperature); a final rinsing step for removing soluble products (preferably subjecting the silane treated filler core material to a flushing medium comprising CO<sub>2</sub>, water, organic solvent and/or surfactant); and drying. The curing between the silanized filler and the composite matrix is afforded by cross linking (un)saturated organic groups attached to both the filler and present in the composite matrix. The cross linking is carried out by applying radiation such as ultraviolet-light or gamma-radiation and/or by activation (decomposition) of previously admixed peroxides or azocompounds e.g. dicumylperoxide or bis-(t-butylperoxy) compounds or azo-bis-isobutyronitrile. In (P1) The glass fiber is silanized using 3-(triethoxysilyl)propylamine as silane coupling agent and the fiber are mixed with polyethylene terephthalate (PET) where the amount of silane is (0.2 - 1) wt.%. The glass fiber is silanized using octyltriethoxysilane as silane coupling agent and thereafter the silanized glass fibers are mixed with polyethylene (PE) where the amount of silane (0.2 - 1) %.

(a) Is carbon black, graphite, granulated or milled thermoplastic or thermoset such as recycled or virgin polymer resin or rubber, wood-derived materials such as lignin, lignosulfates, Kraft lignin and/or cellulose. (b) Is vinyltrimethoxysilane, vinyltriethoxysilane, vinyltri-(2-methoxyethoxy)silane, N-(beta-aminoethyl)-approximatelyg-aminopropyltrimethoxysilane or beta-(3,4-epoxycyclohexyl)ethyltrimethoxysilane or N-trimethoxysilylpropyl-N,N,N-trimethylammonium chloride. (C1) Is selected from monomers comprising at least one ethylenically unsaturated double bonds e.g. 2-acrylamidoglycolic acid, methylene bis-acrylamide, methylene bismethacrylamide, 1,6-hexamethylene bis-acrylamide or diethylenetriamine tris-acrylamide. (C1) And (M1) are functional (meth)acrylates e.g. methyl acrylate, methyl methacrylate, ethyl acrylate, n-hexyl acrylate and/or 2,2-bis(4-methacryloyloxyphenyl)propane. The organic solvent is alcohol, ketone, paraffin, ether, or amine.

**INORGANIC CHEMISTRY - Preferred Components:** The composite material is a polymer glass fiber matrix having a length to diameter aspect ratio of at least 20 and the polymer matrix is a thermoplast or nonthermoplast (e.g. curable polymer). The final glass fiber filler comprises (b) (0.01 - 1 (preferably 0.05 - 0.5, especially 0.08 - 0.2)%. When the composite material is used the dental cement (having a filling degree of at least 10 (preferably 15 - 90, especially 50 - 80)%) and having (a) is a glass bead in the form of fine powder such as a glass bead with particle size so that the BET surface area measured using nitrogen gas is 50 m<sup>2</sup>/g and (a) has particle size 0.005 - 1 microns; and in the paint (a) is mineral fiber or bead (preferably glass bead in the form of fine powder with a particle size so that the BET surface area measured using nitrogen gas is 50 m<sup>2</sup>/g and the fiber is having diameter 0,5 - 3000 microns. (a) Is selected from metal such as, aluminum, tin, lead, magnesium, calcium, and strontium; metal oxides/hydroxides such as oxides of aluminum, tin, lead, magnesium, calcium, strontium; metal salt such as phosphate, sulfide, or sulfate; mineral such as mica, montmorillonite, kaolinite, bentonite, hectorite or hercynite; ceramic materials such as hydrated or anhydrous silicas or silica; clay such as halloysite, montmorillonite including sodium and magnesium bentonite; synthetic or natural zeolite; talc (magnesium silicates) (preferably silica, fumed silica, silica made by sol-gel chemistry, strontium silicate, barium borosilicate, strontium borosilicate, borosilicate, lithium silicate, calcium metasilicate (e.g. wollastonite) and/or calcium magnesium silicate).

Preferred Medium: The treatment medium containing CO<sub>2</sub>, is in its liquid state during the treatment step, (b) is partly or totally dissolved or dispersed in the treatment medium containing CO<sub>2</sub>. When the CO<sub>2</sub> is in its supercritical state during the treatment step, (b) is partly or totally dissolved or dispersed in CO<sub>2</sub>. The CO<sub>2</sub> is changing from its liquid state/gas state to its supercritical state during the treatment step. The treatment medium comprises CO<sub>2</sub> e.g. pure CO<sub>2</sub> (at least 50, preferably at least 95) %. The treatment medium comprises (%): water (up to 50, preferably 10, especially 1), an organic solvent (up to 50, preferably 25, especially 5) and surfactants (up to about 3, preferably up to 1, especially up to 0.2). The ratio (wt/wt) of (b) to the treatment medium is 0.001:1 - 1:1 (preferably 0.01:1 - 0.1:1). The pH value of the treatment medium is either 5 or less or 8 or higher to promote hydrolysis of the silane.

POLYMERS - Preferred Components: (a) Is in the form of porous and non porous particles, preferably having particle diameters 0.001 microns - 4 mm e.g. for dental use (0.001 - 100 microns), in road marking materials (1 - 4 mm) and in paints (0.5 - 3000). (a) Comprises or is in the form of fibers (preferably chopped and non chopped, single crystalline and polycrystalline single filaments and polyfilaments) having length to diameter ratio of 2 - 1000 (preferably 2 - 300, especially 3 - 200) preferably maintaining ratio at least 20 and the diameter 0.001 - 100 microns. (b) Has a molar weight of up to 500 (preferably 150 - 400) g/mol. (C1) is selected from polymer of ethylenically unsaturated monomers, polyester, polyamide, polyether, polyethyleneglycol, melamine-formaldehyde and/or ureaformaldehyde. (M1) is selected from polymer of monomers such as ethylenically unsaturated monomers or difunctional materials such as diols, diamines, diisocyanates or dicarboxylic acids e.g. polyester, polyamide, polyether, polyethyleneglycol, polysaccharide, cellulose, polyethylene, rubber, phenol-formaldehyde, melamine-formaldehyde and/or ureaformaldehyde.

FS CPI

MC CPI: A08-M01D; A08-R01; A11-B01; A11-C02; A12-B01; A12-T04; A12-V02B; E05-E; E31-P03; G02-A02B1; L01-F03A; L01-L02; L01-L07

L47 ANSWER 24 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 2004-699849 [68] WPIX Full-text

DNC C2004-247598 [68]

DNN N2004-554923 [68]

TI Material for sealing constructions comprises a mixture of soil, preferably argillaceous materials and/or coarse clay, and an additive which breaks open the water surrounding the grain

DC A93; L02; Q42

IN ASENDORF K; KITTLER F

PA (CONS-N) CONSOLID TECH DEUT GMBH; (SAEC-N) SAECHSISCHE BAU GMBH

CYC 107

PI WO 2004083532 A1 20040930 (200468)\* DE 17[7]

DE 10312325 A1 20040930 (200468) DE

EP 1604067 A1 20051214 (200582) DE

US 20070059108 A1 20070315 (200722) EN

&lt;--

EP 1604067 B1 20080806 (200854) DE

DE 502004007777 G 20080918 (200862) DE

ADT WO 2004083532 A1 WO 2004-DE528 20040316; DE 10312325 A1 DE

2003-10312325 20030319; EP 1604067 A1 EP 2004-720844 20040316; EP

1604067 B1 EP 2004-720844 20040316; US 20070059108 A1 US

2005-557620 20051118; DE 502004007777 G DE 2004-502004007777 20040316;

DE 502004007777 G EP 2004-720844 20040316; EP 1604067 A1 PCT

Application WO 2004-DE528 20040316; US 20070059108 A1 PCT

Application WO 2004-DE528 20040316; EP 1604067 B1 PCT Application WO 2004-DE528 20040316; DE 502004007777 G PCT Application WO 2004-DE528 20040316

FDT EP 1604067 A1 Based on WO 2004083532 A; EP 1604067 B1 Based on WO 2004083532 A; DE 502004007777 G Based on EP 1604067 A; DE 502004007777 G Based on WO 2004083532 A

PRAI DE 2003-10312325 20030319

IC ICM E02D003-12

ICS C04B026-02; C09K017-00; C09K003-10

IPCI C04B0026-00 [I,C]; C04B0026-00 [I,C]; C04B0026-02 [I,A]; C04B0026-02 [I,A]; C09K0017-00 [I,A]; C09K0017-00 [I,C]; C09K0017-00 [I,A]; C09K0017-00 [I,C]; C09K0003-10 [I,A]; C09K0003-10 [I,C]; C09K0003-10 [I,A]; C09K0003-10 [I,C]; E02D0003-00 [I,C]; E02D0003-00 [I,C]; E02D0003-00 [I,C]; E02D0003-12 [I,A]; E02D0003-12 [I,A]

IPCR C04B0028-00 [I,C]; C04B0028-02 [I,A]; E02B0003-10 [I,A]; E02B0003-10 [I,C]; E02D0017-18 [I,A]; E02D0017-18 [I,C]; E02D0019-00 [I,C]; E02D0019-16 [I,A]; E02D0003-00 [I,C]; E02D0003-12 [I,A]

EPC C04B0028-02; E02B0003-10; E02D0003-12C; E02D0017-18; E02D0019-16

NCL NCLM 405/263.000

NCLS 405/270.000

AB WO 2004083532 A1 UPAB: 20060203

NOVELTY - Material for sealing constructions comprises a mixture of soil, preferably argillaceous materials and/or coarse clay, and an additive which breaks open the water surrounding the grain. 1 cubic meter of soil contains up to 0.5 volume%, preferably 0.01-0.1 volume%, especially 0.03 volume% additive.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a process for sealing constructions using the above material.

USE - For sealing constructions.

ADVANTAGE - The material has good sealing properties.

TECH CERAMICS AND GLASS - Preferred Features: The soil contains at least 10 wt.%, preferably 15 wt.% clay and/or coarse clay. Cement and/or lime in an amount of 1-10 wt.%, preferably 3.5 wt.%, is mixed with the mixture. The material is injected into the soil or sprayed onto the surface of the soil.

POLYMERS - Preferred Material: The additive is a polymer, preferably a polymeric (meth)acrylic amide, especially a saponified paraffin.

FS CPI; GMPI

MC CPI: A12-A02; A12-R01; L02-D12

L47 ANSWER 25 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 2004-655380 [64] WPIX Full-text

DNC C2004-234477 [64]

TI Increasing the water-repellency of a mineral binder composition, e.g. useful in grouts, mortars or concrete, comprises adding a polyalkylalkylsiloxane grafted with higher hydrocarbon groups

DC L02; P73

IN CASTAING J; CASTAING J C; DERUELLE M; JOUBERT D

PA (RHOD-C) RHODIA CHIM; (RHOD-C) RHODIA CHIM SAS; (CAST-I) CASTAING J; (DERU-I) DERUELLE M; (JOUB-I) JOUBERT D

CYC 107

PI FR 2852312 A1 20040917 (200464)\* FR 28[0] C04B024-42

WO 2004080909 A2 20040923 (200464) FR

EP 1601628 A2 20051207 (200580) FR

BR 2004008185 A 20060404 (200628) PT

US 20070172658 A1 20070726 (200750) EN

ADT FR 2852312 A1 FR 2003-2921 20030310; BR 2004008185 A BR 2004-8185 20040305; EP 1601628 A2 EP 2004-717663 20040305; WO 2004080909 A2 WO 2004-FR528 20040305; EP 1601628 A2 WO 2004-FR528 20040305; BR 2004008185 A WO 2004-FR528 20040305; US 20070172658 A1 WO 2004-FR528 20040305; US 20070172658 A1 US 2006-549218 20060821

FDT EP 1601628 A2 Based on WO 2004080909 A; BR 2004008185 A Based  
on WO 2004080909 A

PRAI FR 2003-2921 20030310

IC ICM C04B024-42

ICS C04B040-00

IPCI B32B0013-00 [I,A]; B32B0013-00 [I,C]; C08L0083-00 [I,C]; C08L0083-04  
[I,A]

IPCR C04B0024-00 [I,C]; C04B0024-42 [I,A]; C04B0040-00 [I,A]; C04B0040-00  
[I,C]; C09K0008-42 [I,C]; C09K0008-467 [I,A]

EPC C04B0024-42; C04B0040-00D4; C08G0077-04; C09K0008-467

NCL NCLM 428/405.000

NCLS 106/606.000; 525/100.000

AB FR 2852312 A1 UPAB: 20060203

NOVELTY - Increasing the water-repellency of a mineral binder composition comprises adding a polyalkylalkylsiloxane (I) grafted with hydrocarbon groups having 6-18 carbon atoms.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a product produced as above.

USE - The product is useful in grouts, mortars, concrete, tile adhesives, jointing mortars, one-coat finishes, exterior thermal insulation systems, finishing and renovating coatings, adhesives and coatings for insulating complexes (not defined), repair mortars, sealing coats, oil well cementing slurries or plaster-based coatings (all claimed).

ADVANTAGE - (I) is more effective in increasing water-repellency than nongrafted silicones.

TECH CERAMICS AND GLASS - The mineral binder is preferably a hydraulic binder, especially a ~~cement~~ (e.g. Portland, high-alumina or blast furnace ~~cement~~), an air-drying binder, e.g. plaster, a lime-reactive pozzuolanic material selected from fly ash, calcined shale and natural or synthetic pozzuolans.  
POLYMERS - Preferred Polysiloxane: (I) is of formula (Ia):  $M-(D(R))_x-M$  (Ia)

$x = 5-500$ , especially 50;

$M = Me_3SiO$ ;

$D = MeSiO$ ;

$R = 6-18C$  (cyclo)alkyl, especially dodecyl or octyl.

Preferred Process: (I) is optionally added in admixture with a latex comprising a water-insoluble polymer, especially a vinyl acetate, alkyl (meth)acrylate or styrene polymer or a copolymer thereof with an olefin, vinyl ester, alkyl maleate or fumarate, vinylaromatic monomer, vinyl halide, diene, methallyl ester or N-alkenyl (meth)acrylamide, and optionally with acrylamide, (meth)acrylic acid, vinylsulfonic acid or 2-acrylamido-2-methylpropane sulfonic acid.

ABEX EXAMPLE - A 50% acetate/versatate latex (5.1 parts by weight) was mixed with a 56% methyl dodecyl polysiloxane emulsion (0.16 parts) and diluted to 5.3% solids with water. The mixture (19 parts) was added to a mortar comprising sand (62.45 parts), ~~cement~~ (35 parts), Ternal RG (RTM) (1 part), lime (0.5 parts) and Culminal C8350 (RTM) (0.05 parts). The mortar was mixed with water (18%), set in a cylindrical mold for 1 day, removed from the mold, aged for 7 days, coated with a ~~paraffin~~ mixture on the curved surface, and contacted with water on one flat surface. The water uptake rate (g/m<sup>2</sup>.h<sup>1/2</sup>) calculated after 4 hours was 242, compared with 327-387 using conventional dimethyl polysiloxanes.

FS CPI; GMPI

MC CPI: L02-D01; L02-D14F

L47 ANSWER 26 OF 44 WPIX COPYRIGHT 2009

THOMSON REUTERS on STN

AN 2004-258916 [25] WPIX Full-text

DNC C2004-101233 [25]  
DNN N2004-205735 [25]  
TI ~~Cement~~ composition for inhibiting gas migration from subterranean zone into well bore ~~cement~~, comprises ~~cement~~ and gelling additive capable of passing into and forming crosslinked gel in subterranean zone  
DC A14; A17; A93; H01; L02; Q49  
IN BIEZEN E; DAO B; PHAM T; VIJN J P  
PA (BIEZ-I) BIEZEN E; (DAOB-I) DAO B; (HALL-C) HALLIBURTON ENERGY SERVICES INC; (PHAM-I) PHAM T; (VIJN-I) VIJN J P  
CYC 36  
PI EP 1394353 A2 20040303 (200425)\* EN 12[1]  
CA 2436377 A1 20040229 (200425) EN  
NO 2003003748 A 20040301 (200425) NO  
US 20040048751 A1 20040311 (200425) EN  
BR 2003002118 A 20040824 (200458) PT  
MX 2003007706 A1 20040401 (200477) ES  
US 20050160947 A1 20050728 (200550) EN  
US 6936574 B2 20050830 (200557) EN  
US 7060129 B2 20060613 (200639) EN  
ADT EP 1394353 A2 EP 2003-255252 20030822; US 20040048751 A1 US 2002-233038 20020830; US 20050160947 A1 Div Ex US 2002-233038 20020830; US 6936574 B2 US 2002-233038 20020830; BR 2003002118 A BR 2003-2118 20030612; CA 2436377 A1 CA 2003-2436377 20030804; NO 2003003748 A NO 2003-3748 20030825; MX 2003007706 A1 MX 2003-7706 20030827; US 20050160947 A1 US 2005-36144 20050114; US 7060129 B2 Div Ex US 2002-233038 20020830; US 7060129 B2 US 2005-36144 20050114  
FDT US 7060129 B2 Div ex US 6936574 B  
PRAI US 2002-233038 20020830  
US 2005-36144 20050114  
IC ICM E21B033-138  
ICS C04B040-00; E21B033-14; E21B033-16  
IPCI C04B0024-00 [I,A]; C04B0024-00 [I,C]; C04B0024-12 [I,A]  
IPCR C04B0024-00 [I,C]; C04B0024-26 [I,A]; ~~C04B0026-00~~ [I,C]; ~~C04B0026-02~~ [I,A]; C04B0028-00 [I,C]; C04B0028-02 [I,A]; C04B0007-00 [I,A]; C04B0007-00 [I,C]; C08J0003-00 [I,A]; C08J0003-00 [I,C]; C09K0003-00 [I,A]; C09K0003-00 [I,C]; C09K0008-42 [I,C]; C09K0008-493 [I,A]; E21B [I,S]; E21B0021-00 [I,A]; E21B0021-00 [I,C]; E21B0033-13 [I,A]; E21B0033-13 [I,C]; E21D0011-04 [I,A]; E21D0011-04 [I,C]  
EPC C04B0024-26N; C04B0024-26V; C04B0028-02; C09K0008-493  
NCL NCLM 106/724.000  
NCLS 106/727.000; 106/823.000; 524/004.000; 524/005.000; 524/006.000; 524/556.000  
AB EP 1394353 A2 UPAB: 20060121  
NOVELTY - A ~~cement~~ composition comprises a ~~cement~~ , and a gelling additive capable of passing into a subterranean zone when the ~~cement~~ composition is displaced into a well bore. The gelling additive is further capable of forming a crosslinked gel in the subterranean zone to inhibit gas migration from the subterranean zone into the ~~cement~~.  
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a process for inhibiting gas migration from a subterranean zone into a well bore ~~cement~~, comprising displacing a gelling additive into a well bore, and allowing the gelling additive to form crosslinked gel in the subterranean zone to inhibit gas migration from the subterranean zone into the ~~cement~~.  
USE - Used for inhibiting gas migration from a subterranean zone into well bore ~~cement~~ (claimed).  
ADVANTAGE - The crosslinked gel acts as barrier to gas in the subterranean zone and thus inhibits the gas from passing into the ~~cement~~ and forming flow channels before the ~~cement~~ can set.

DESCRIPTION OF DRAWINGS - The figure is a graph showing fluid loss of gelling additive from a ~~cement~~ composition as a function of concentration of fluid loss control additive in the ~~cement~~ composition.

TECH CERAMICS AND GLASS - Preferred Compositions: The ~~cement~~ composition comprises 0.3-10 wt.% gelling additive.

Preferred Components: The ~~cement~~ composition further comprises an organic gelling agent capable of crosslinking the gelling additive.

POLYMERS - Preferred Materials: The gelling agent is polyalkyleneimine, polyfunctional aliphatic amine, aralkylamine, and/or heteroaralkylamine. The gelling additive is a copolymer of non-acidic ethylenically unsaturated polar monomer(s) or ethylenically unsaturated ester(s). The polyfunctional aliphatic amine is polyalkylenepolyamine, preferably polyethylene- or polypropylene-polyamine, or polymerized ethyleneimine or propyleneimine. The copolymer comprises 1-3 polar monomers and 1-3 unsaturated esters. The unsaturated ester is formed from hydroxyl compound and ethylenically unsaturated carboxylic acid consisting of (meth)acrylic, crotonic or cinnamic acid. The hydroxyl compound is an alcohol of formula ROH. The ethylenically unsaturated ester is t-butyl acrylate, and/or the ethylenically unsaturated polar monomer is amide of unsaturated carboxylic acid, preferably acrylamide. The gelling agent and copolymer are in aqueous solution. The gelling additive is a polymerizable monomer comprising water soluble hydroxy unsaturated carbonyl compound(s), preferably self-crosslinking monomer of formula (I).

R = alkyl, alkenyl, cycloalkyl, aryl, arylalkyl, or aromatic or heterocyclic group substituted with hydroxyl, ether and/or thioether group;

R1 = -O- or -NH-;

R2 = H or -CH3; and

n = 1-2.

The hydroxyl unsaturated carbonyl is hydroxyethylacrylate, N-hydroxymethylacrylamide, N-hydroxymethyl methacrylamide, hydroxyethylmethacrylate, hydroxymethylacrylate, hydroxymethylmethacrylate, N-hydroxyethylacrylamide, or N-hydroxyethylmethacrylamide.

Preferred Process: The process further comprises controlling fluid loss from the ~~cement~~ composition to maintain the ~~cement~~ composition at a hydrostatic pressure of at least the pressure in the subterranean zone to allow the gelling additive in the subterranean zone to form crosslinked gel; and controlling the ~~cement~~ to water ratio in the ~~cement~~ composition as required for the ~~cement~~ to react and set.

ORGANIC CHEMISTRY - Preferred Components: The composition further comprises an azo initiator of formula Z-N=N-B, which is capable of initiating polymerization of the monomer. The azo initiator is 2,2'-azobis(N,N'-dimethylene isobutyramidine)dihydrochloride, 2,2'-azobis(2-amidinopropane)-dihydrochloride, or 2,2'-azobis(2-methyl-N(2-hydroxyethyl)propionamide).

(i):

Z = group of formula (II);

B = Z or R2;

R1 = -CH3 or -CN;

A = -(R4-)C(=R3), or -(CH2)2COOH, or -CH3;

R3 = =N-, =NH, or =O; and

R4 = -NH-, -NH(CH2)2OH, -NHC(CH2OH)2CH3, or -NHC(CH2OH)3;

where when R4 is -NH- then:

R3 = =N-;

R1 = -CN;



A = -CH<sub>3</sub>; and

B = R<sub>2</sub>.

ABEX EXAMPLE - Cement composition was prepared comprising (wt.%): H2Zero system (50), Dyckerhoff G cement (100), and Halad-344 (RTM; additive) (0.25). This formed a gel in water bath at 86degreesC. Fluid loss at 86degreesF was 250 cc API, and final compressive strength as 2854 psi/91 hours.

FS CPI; GMPI

MC CPI: A12-R01A; A12-W10C; H01-C02A; H01-C02B; L02-D12

L47 ANSWER 27 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 2001-451279 [48] WPIX Full-text

CR 2001-266135

DNC C2001-136132 [48]

DNN N2001-334172 [48]

TI Heat stable article e.g. food storage containers, comprises filled composite material containing filler, fibrous material and binder selected from natural and synthetic latexes and dispersed polymers

DC A81; L02; Q34

IN DERBYSHIRE D B; MCDONALD C J; RUBBRIGHT H A; SPEARS D A

PA (DOWC-C) DOW CHEM CO

CYC 88

PI WO 2001023471 A1 20010405 (200148)\* EN 64[7]

AU 2000076208 A 20010430 (200148) EN

ADT WO 2001023471 A1 WO 2000-US26653 20000928; AU 2000076208 A AU 2000-76208 20000928

FDT AU 2000076208 A Based on WO 2001023471 A

PRAI US 1999-156854P 19990930

IPCR B29C0039-00 [I,A]; B29C0039-00 [I,C]; B65D0081-34 [I,A]; B65D0081-34 [I,C]; C04B0026-00 [I,C]; C04B0026-04 [I,A]

EPC B29C0039-00B2; B65D0081-34C; C04B0026-04

ICO L29C0233:04; L29C0305:08; L29C0305:30; L29C0305:46; L65D0081:34; L65D0081:34H100B1; L65D0081:34M1; L65D0205:00

AB WO 2001023471 A1 UPAB: 20050526

NOVELTY - A heat stable article comprises a filled composite material containing filler, fibrous material and a binder. The binder is selected from natural and synthetic latexes and natural and synthetic dispersed polymers.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(i) latex composition which comprises soft monomer(s) and/or hard monomer(s);

(ii) use of latex composition; and

(iii) manufacture of shaped article which involves causing colloidal destabilization of mixture containing water and filled composite material and forming the filled composite material into a shaped article.

USE - Heat stable article e.g., food storage containers, ovenable containers, protective packaging devices, embossed floor tiles and plastic housing replacements.

ADVANTAGE - The heat stable article can be heated to high temperatures in oven without generating odor.

TECH POLYMERS - Preferred Material: The fibrous material is chosen from cellulose, polyester, glass, nylon, polypropylene, polyethylene, acrylic, rayon, aramide and/or polystyrene. The soft monomer in the latex composition is chosen from methyl acrylate, ethyl acrylate, n-butyl acrylate, n-butyl methacrylate and/or vinylidene chloride and hard monomer is chosen from methyl methacrylate, acrylonitrile and/or vinyl chloride.

Preferred Property: The glass transition temperature of latex composition is 0-125 degreesC.

ORGANIC CHEMISTRY - Preferred Composition: The latex composition

further comprises polymerizable emulsion stabilizer and molecular weight modifier. The emulsion stabilizer is selected from fumaric acid, itaconic acid, acrylic acid, methacrylic acid, acrylamide, sulfopropyl methacrylate and/or 2-hydroxyethyl acrylate. The molecular weight modifier is selected from glycidyl methacrylate, allyl methacrylate, trimethylol propane triacrylate, n-methylol methacrylamide and ethyl glycol dimethacrylate. The latex composition contains 0.1-99 weight percent (wt.%) of methyl acrylate, 0.1-99 wt.% of methyl methacrylate, 0.1-5 wt.% of polymerizable emulsion stabilizer and 0-3 wt.% of molecular weight modifier. INORGANIC CHEMISTRY - Preferred Compounds: The filler is calcium carbonate, talc and/or clay. The colloidal destabilization is caused by adding additive such as flocculants and/or cationic sources.

Preferred Method: Alternately, the mixture is formed into shaped article by drawing an amount of mixture onto a first tool and transferring the mixture tool to a second tool or alternately placing colloiddally destabilized mixture on a moving wire mesh to form a sheet which is applied to a first tool and then mated to a second tool. The sheet is dried prior to applying to first tool. A lid is provided to seal the heat stable article.

FS CPI; GMPI

MC CPI: A11-B01; A12-P01B; L02-J02B

L47 ANSWER 28 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 1997-295148 [27] WPIX Full-text

DNC C1997-095507 [27]

TI Thermally reversibly thickening binder compositions - comprising styrene\*-butadiene\* resin latex and thickening compound of polyoxyethylene-based compound

DC A12; A25; A81; A82; F06; G02; G03; L02

IN OKAMOTO T; OSUMI T

PA (SANN-C) SANYO CHEM IND LTD

CYC 1

PI JP 09111133 A 19970428 (199727)\* JA 8[0]

JP 2779610 B2 19980723 (199834) JA 8

ADT JP 09111133 A JP 1996-157650 19960528; JP 2779610 B2 JP 1996-157650 19960528

FDT JP 2779610 B2 Previous Publ JP 09111133 A

PRAI JP 1995-188213 19950629

IPCR C03C0025-10 [I,A]; C03C0025-10 [I,C]; C04B0026-00 [I,C]; C04B0026-04 [I,A]; C08F0290-00 [I,A]; C08F0290-00 [I,C]; C08F0290-06 [I,A]; C08L0101-00 [I,A]; C08L0101-00 [I,C]; C08L0101-02 [I,A]; C08L0101-12 [I,A]; C08L0021-00 [I,C]; C08L0021-02 [I,A]; C08L0009-00 [I,C]; C08L0009-08 [I,A]; C09D0011-10 [I,A]; C09D0011-10 [I,C]; C09D0201-02 [I,A]; C09D0201-02 [I,C]; D04H0001-58 [I,A]; D04H0001-58 [I,C]; D06M0015-21 [I,A]; D06M0015-21 [I,C]; D06M0015-693 [I,A]; D06M0015-693 [I,C]; D21H0017-00 [I,C]; D21H0017-20 [I,A]; D21H0017-31 [I,A]; D21H0019-00 [I,C]; D21H0019-44 [I,A]

FCL C03C0025-02 Z; C04B0026-04 Z; C08F0290-00; C08F0290-06; C08F0290-06 MRS; C08L0101-00; C08L0101-02; C08L0101-02 LSY; C08L0101-12; C08L0101-12 LTB; C08L0021-02; C08L0009-08; C08L0009-08 LAZ; C09D0011-10; C09D0201-02; D04H0001-58; D04H0001-58 A; D06M0015-21; D06M0015-693; D21H0001-28 Z; D21H0017-20; D21H0019-44; D21H0003-64  
FTRM 4G012; 4G060; 4G112; 4J002; 4J027; 4J038; 4J039; 4J127; 4L033; 4L047; 4L055; 4J127/AA07; 4L033/AB09; 4J027/AC02; 4J027/AC03; 4J027/AC04; 4J027/AC06; 4J027/AC09; 4L033/AC11; 4L033/AC15; 4J039/AD01; 4J039/AD03; 4J039/AD05; 4J039/AD06; 4J039/AD08; 4J039/AD09; 4J039/AD10; 4J039/AD11; 4J039/AD12; 4J039/AD13; 4J039/AD14; 4J039/AD15; 4J039/AD20; 4J039/AD22; 4J039/AD23; 4J039/AE07;

4L055/AG63; 4L055/AG71; 4L055/AG73; 4L055/AG76; 4L055/AG88;  
 4L055/AG89; 4L055/AG97; 4L055/AH33; 4L055/AH37; 4L055/AH50;  
 4J027/AJ01; 4L055/AJ04; 4J027/BA02; 4J027/BA03; 4J027/BA04;  
 4J027/BA05; 4J027/BA06; 4J027/BA07; 4J027/BA08; 4J027/BA09;  
 4J027/BA12; 4J027/BA13; 4J027/BA14; 4J027/BA15; 4L047/BA15;  
 4J027/BA20; 4J027/BA21; 4J127/BB02.1; 4J002/BB06.W; 4J127/BB10.1;  
 4J002/BB10.W; 4J002/BB14.W; 4J127/BB22.1; 4J127/BC02.1; 4L047/BC02;  
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 4J127/BC15.1; 4J002/BD05.W; 4J127/BD22.1; 4J002/BE01.W; 4J002/BE02.W;  
 4L055/BE07; 4L055/BE08; 4J039/BE22; 4J039/BE23; 4J127/BE34.1;  
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 4J002/BJ00.W; 4J002/BL01.W; 4J002/BL02.W; 4J002/BN20.X; 4J002/BQ00.W;  
 4J002/BQ00.X; 4J038/CA02.1; 4J027/CA03; 4L033/CA03; 4J038/CA04.1;  
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 4L033/CA48; 4L033/CA50; 4L033/CA60; 4L033/CA68; 4J027/CB02;  
 4J027/CB03; 4J038/CB05.1; 4J127/CB05.1; 4J027/CB06; 4J027/CB07;  
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 4J038/CH05.1; 4J038/CH07.1; 4J038/CH12.1; 4J038/CH14.1; 4J038/CH17.1;  
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 4J002/CK02.W; 4J002/CK04.X; 4J038/CR07.1; 4J127/DA54; 4J127/DA63;  
 4J038/DD10.2; 4J038/DF02.2; 4J038/DG00.1; 4J038/DG03.1; 4J038/DG05.2;  
 4J038/DG06.1; 4J038/DG06.2; 4J038/DG08.1; 4J038/DG09.1; 4J038/DG13.2;  
 4J038/DG14.2; 4J038/DG26.1; 4J038/DG26.2; 4L055/EA30; 4J039/EA32;  
 4L055/EA32; 4J127/FA09; 4L055/FA12; 4J127/FA14; 4L055/FA15;  
 4L055/FA30; 4J002/FD01.0; 4J002/FD20.0; 4L055/GA19; 4J002/GJ00;  
 4J002/HA04

AB JP 09111133 A UPAB: 20050517

A thermally reversibly thickening binder composition comprises (A) a anionic resin latex and (B) a thickening compound with the hydrophilicity and hydrophobicity changing reversibly at a certain boundary temperature containing a cationic group.

USE - The thermally reversibly thickening binder compositions are useful for coatings for cloth, films and sheets and binders for carpet backing, unwoven fabric, glass fibres, adhesives, inks, ~~ceramics~~ and paints, especially for coated paper.

ADVANTAGE - The binder compositions have heat sensitive gelation properties, i.e. low viscosity at a low temperature, form hard gel by increasing the viscosity rapidly by heating, and can impart high gloss and printability to coated paper.

ABDT JP9111133

A thermally reversibly thickening binder composition comprises (A) a anionic resin latex and (B) a thickening compound with the hydrophilicity and hydrophobicity changing reversibly at a certain boundary temperature containing a cationic group.

USE

The thermally reversibly thickening binder compositions are useful for coatings for cloth, films and sheets and binders for carpet backing,

unwoven fabric, glass fibres, adhesives, inks, ~~ceramics~~ and paints, especially for coated paper.

#### ADVANTAGE

The binder compositions have heat sensitive gelation properties, i.e. low viscosity at a low temperature, form hard gel by increasing the viscosity rapidly by heating, and can impart high gloss and printability to coated paper.

#### EXAMPLE

A composition consisting of 100 pts.weight SBR resin latex with a solid of 47.9% and 3 pts.weight polymer aqueous solution with a solid of 20% obtained by polymerising 9 pts.weight polyethylene glycol (polymerisation  $\alpha = 7$ ) monomethyl ether mono-methacrylate and 1 pt.weight N,N-dimethylaminopropyl(meth)acrylamide in the presence of 2,2'-azobis(2,4-dimethyl valeronitrile) had viscosities at 25°C, 80°C and 25°C after being cooled from 80°C of 150, over 100,000 and 150 cP respectively. (RP)

#### PREFERRED MATERIAL

(A) is resin latex obtained by using an anionic emulsifier bearing a radically polymerisable group (A) is preferably styrene-butadiene resin latexes obtained by emulsion polymerisation using (meth)acrylate bearing both an anionic group and a polyoxypropylene chain as emulsifier. (B) is thickening compounds containing at least 50 weight% of polyoxyethylene groups and bearing at least one cationic group (B) is preferably copolymers of a vinyl monomer bearing a polyoxyethylene group and a vinyl monomer bearing a cationic group (B) preferably has a molecular weight of 700-50,000 per one cationic group.

#### PREFERRED COMPOSITION

The binder composition contains 0.01-30 weight% on solid basis of (B) per 100 pts.weight (A) plus (B) on solid basis.

FS CPI

MC CPI: A07-B; A12-B01A; F03-E01; G02-A02D1; G02-A03; L02-G01

L47 ANSWER 29 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 1996-478663 [48] WPIX Full-text

DNC C1996-149451 [48]

TI Forming extruded parts from inorganic material with reduced cracking and rigidity - by using binder comprising one or more vinyl acetate-free polymers containing at least one mono:ethylenically unsatd. unit and at least one acid-free monomer

DC A13; A14; A32; J04; L02; P53; P64

IN WU X; XIANLIANG W

PA (ROHM-C) ROHM & HAAS CO; (WUXX-I) WU X

CYC 13

PI EP 739868 A1 19961030 (199648)\* EN 7[0]

AU 9650570 A 19961107 (199701) EN

ZA 9603217 A 19961231 (199707) EN 13[0]

CA 2174391 A 19961025 (199708) EN

JP 09025174 A 19970128 (199714) JA 7[0]

SG 38956 A1 19970417 (199724) EN

MX 9601454 A1 19970701 (199827) ES

BR 9602031 A 19981006 (199847) PT

ADT EP 739868 A1 EP 1996-302738 19960419; AU 9650570 A AU 1996-50570

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1996-2174391 19960417; MX 9601454 A1 MX 1996-1454 19960418; ZA 9603217

A ZA 1996-3217 19960423; BR 9602031 A BR 1996-2031 19960424; JP

09025174 A JP 1996-126355 19960424

PRAI US 1995-427064 19950424

IPCR B22F0003-02 [I,A]; B22F0003-02 [I,C]; B28B0003-20 [I,A]; B28B0003-20 [I,C]; C04B0035-63 [I,C]; C04B0035-632 [I,A]; C04B0035-634 [I,A]; C08F0220-00 [I,C]; C08F0220-10 [I,A]; C08F0220-18 [I,A]; C08K0003-00

[I,A]; C08K0003-00 [I,C]; C08L0033-00 [I,C]; C08L0033-04 [I,A];  
C08L0033-08 [I,A]

EPC C04B0035-634

FCL B22F0003-02 M; B28B0003-20 K; C04B0035-00 108; C08F0220-10;  
C08F0220-18 MMB; C08K0003-00; C08L0033-04; C08L0033-08 LHT

FTRM 4G030; 4G054; 4J002; 4J023; 4J100; 4K018; 4G030/AA07; 4G030/AA08;  
4G030/AA10; 4G030/AA12; 4J023/AA12; 4J023/AA13; 4J023/AA14;  
4G030/AA16; 4G030/AA17; 4J023/AA17; 4J023/AA18; 4J023/AA22;  
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4G030/AA37; 4G030/AA39; 4G030/AA45; 4G030/AA46; 4G030/AA47;  
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4G030/BA20; 4J100/BA56.P; 4J100/BA64.P; 4J100/BA64.Q; 4J023/BC03;  
4J023/BC04; 4J002/BC10.1; 4J023/BC23; 4J100/BC43.P; 4J023/BC43;  
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4J002/DA06.6; 4J002/DA08.6; 4J100/DA47; 4J002/DB01.6; 4J002/DE07.6;  
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4J002/DJ00.6; 4J002/DJ01.6; 4J002/DK00.6; 4J002/FD01.6; 4J002/FD20.6;  
4G030/GA14; 4G030/GA21; 4J002/GT00; 4J023/HA30; 4G030/PA21

AB EP 739868 A1 UPAB: 20060112

The method for forming extruded parts from an inorganic material comprises using as a binder for the inorganic material one or more vinyl acetate-free polymers comprising, as polymerised units, at least 1% of one or more monoethylenically unsatd. acids; and 99-1% of one or more acid-free monomers. Also claimed is a method in which the modulus of rupture of the extruded parts is improved by more than 50% as compared to extruded parts formed using a binder containing vinyl acetate.

USE - The extruded parts include ~~ceramic~~ tapes, tubes or rods, stainless steel tapes, metal wires, ribbons and complex structures including honeycomb monoliths for use as catalyst substrates.

ADVANTAGE - Using these binders, extruded parts can be dried at room temperature or elevated temperature. The binders can be mixed readily with ~~ceramic~~ or metal powders to form a homogeneous paste and provide the necessary rheological and mechanical properties for extrusion of a variety of shapes and materials. The ~~ceramic~~ and metal prods. have reduced cracking and rigidity and improved mixing and green strength as compared to prods. containing conventional extrusion binders.

ABDT EP739868

The method for forming extruded parts from an inorganic material comprises using as a binder for the inorganic material one or more vinyl acetate-free polymers comprising, as polymerised units, at least 1% of one or more monoethylenically unsatd. acids; and 99-1% of one or more acid-free monomers.

Also claimed is a method in which the modulus of rupture of the extruded parts is improved by more than 50% as compared to extruded parts formed using a binder containing vinyl acetate.

USE

The extruded parts include ~~ceramic~~ tapes, tubes or rods, stainless steel tapes, metal wires, ribbons and complex structures including honeycomb monoliths for use as catalyst substrates.

ADVANTAGE

Using these binders, extruded parts can be dried at room temperature or elevated temperature. The binders can be mixed readily with ~~ceramic~~

or metal powders to form a homogeneous paste and provide the necessary rheological and mechanical properties for extrusion of a variety of shapes and materials. The ceramic and metal prods. have reduced cracking and rigidity and improved mixing and green strength as compared to prods. containing conventional extrusion binders.

#### EXAMPLE

PEG-400 2.5 (0.5 g) was added to Alcoa A-14 (RTM: alumina powder; 100.0 g) followed by AMP-95 (RTM: 95% solution of 2-amino-2-methyl-1-propanol; 2.5 g), with mixing. After 5 minutes, a mixture of acrylic emulsion binder A (86% ethyl acrylate, 10% methyl methacrylate, 4% acrylic acid; 4.9 g) and acrylic emulsion binder B (50% ethyl acrylate, 40% methacrylic acid, 10% polyethoxylated octadecanol methacrylate; 4.4 g) was added and mixing continued for 5 minutes to give a homogeneous distribution. Water (16.3 g) was added and mixing continued to form a uniform particulate paste (pH 10.8). The paste was rolled on a 3-roll mill 3 times before extrusion. The rolled flake-like paste was processed in a food processor, then fed into a ram extruder (2' dia. barrel, 12' stroke). It was extruded at room temperature through a round die. The average modulus of rupture of the extrudate was  $12.21 \pm 0.8$  MPa. A comparative example using an emulsion binder which was 55% polymer (47% vinyl acetate, 27% butylacrylate, 22% 2-ethylhexylacrylate, 5% acrylic acid; 7.3 g) gave an extrudate having a modulus of rupture of  $3.4 \pm 0.1$  MPa. (NA)

#### PREFERRED PROCESS

The process may further comprise extruding a mixture of (a) the inorganic material; (b) the binder; (c) 0-30 weight% of water and (d) 0-20 weight% of one or more processing aids. The binder comprises a mixture of at least two polymers as above. The process may further comprise the addition of one or more cpds. selected from organic and inorganic bases. The monoethylenically unsatd. acids are selected from monoethylenically unsatd. carboxylic acids, sulphonic acids, phosphonic acids and combinations thereof, pref. (meth)acrylic acid, crotonic acid, vinylacetic acid, maleic acid, itaconic acid, mesaconic acid, fumaric acid, citraconic acid, 2-acrylamido-2-methyl-propane sulphonic acid, allyl-sulphonic acid, allyl-phosphonic acid, allyl-oxybenzenesulphonic acid, 2-hydroxy-3-(2-propenyloxy)propane sulphonic acid, isopropenyl-phosphonic acid, vinylphosphonic acid, styrene-sulphonic acid and vinylsulphonic acid. The acid-free monomers are selected from methyl, ethyl, butyl (meth)acrylate and isobutyl methacrylate and hydroxyalkyl esters of (meth)acrylic acid such as hydroxyethyl or hydroxypropyl(meth)acrylate. The polymeric binders comprise, as polymerised units, one or more monomers selected from (meth)acrylonitrile, allyl alcohol, phosphoethyl methacrylate, 2- or 4-vinylpyridine, N-vinylpyrrolidone, N-vinylformamide, N-vinylimidazole, vinyl acetate, styrene, (meth)acrylamide, N-t-butylacrylamide, N-methylacrylamide and N,N-dimethylacrylamide. The inorganic material comprises one or more of alumina, aluminium nitride, silica, silicon, silicon carbide, silicon nitride, sialon, zirconia, zirconium carbide, zirconium boride, titania, titanium nitride, titanium carbide, barium titanate, titanium boride, boron nitride, boron carbide, tungsten carbide, tungsten boride, tin oxide, ruthenium oxide, yttrium oxide, magnesium oxide and calcium oxide, carbon, iron, nickel, copper, tungsten, titanium, metal oxides, ceramic superconductors and metal superconductors. The unsatd. acids are present at 1-50 weight% based on the polymer. The modulus of rupture is improved by more than 100% (200%).

FS CPI; GMPI

MC CPI: A08-R01; A11-B07; J04-E03; L02-A03; N06-F

L47 ANSWER 30 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 AN 1994-280617 [35] WPIX Full-text  
 DNC C1994-128034 [35]  
 TI Crosslinkable dispersion powders, useful as binders for fibres -  
 comprise copolymers of vinyl alkanoate ester(s) or alkyl  
 (meth)acrylate(s), containing 0.1-10 weight per cent N-methylol-(meth  
 )acrylamide units.  
 DC A18; A23; A81; F04; L02  
 IN BRINK G; ERNET W; KENKEL J; KINKEL J; SCHULZE J; WIERER K; WIERER K A  
 PA (WACK-C) WACKER CHEM GMBH  
 CYC 33  
 PI DE 4306808 A1 19940908 (199435)\* DE 7[0]  
 WO 9420661 A1 19940915 (199437) EN 27[0]  
 AU 9462576 A 19940926 (199503) EN  
 NO 9503446 A 19950901 (199546) NO  
 FI 9504129 A 19950904 (199548) FI  
 EP 687317 A1 19951220 (199604) DE [0]  
 CZ 9501407 A3 19951213 (199606) CS  
 BR 9405880 A 19951226 (199609) PT  
 JP 08503255 W 19960409 (199645) JA 34[0]  
 EP 687317 B1 19961113 (199650) DE 9[0]  
 DE 59401045 G 19961219 (199705) DE  
 SK 9500729 A3 19961204 (199707) SK  
 ES 2094054 T3 19970101 (199708) ES  
 AU 675704 B 19970213 (199715) EN  
 NO 180805 B 19970324 (199719) NO  
 CN 1106854 A 19950816 (199731) ZH  
 HU 70690 T 19951030 (199732) HU  
 US 5668216 A 19970916 (199743) EN 5  
 HU 214051 B 19971229 (199819) HU  
 JP 2739611 B2 19980415 (199820) JA 6[0]  
 RU 2101404 C1 19980110 (199835) RU 8[0]  
 US 5886121 A 19990323 (199919) EN  
 CA 2161119 C 19990413 (199933) EN  
 MX 187096 B 19971121 (199934) ES  
 KR 138805 B1 19980515 (200014) KO  
 CZ 287541 B6 20001213 (200108) CS  
 SK 281475 B6 20010409 (200131) SK  
 FI 114321 B1 20040930 (200465) FI  
 CN 1094145 C 20021113 (200526) ZH  
 ADT DE 4306808 A1 DE 1993-4306808 19930304; AU 9462576 A AU 1994-62576  
 19940303; AU 675704 B AU 1994-62576 19940303; BR 9405880 A BR  
 1994-5880 19940303; CA 2161119 C CA 1994-2161119 19940303; DE 59401045  
 G DE 1994-59401045 19940303; EP 687317 A1 EP 1994-909916 19940303; EP  
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 19940303; ES 2094054 T3 EP 1994-909916 19940303; JP 08503255 W JP  
 1994-519570 19940303; JP 2739611 B2 JP 1994-519570 19940303; MX 187096  
 B MX 1994-1633 19940303; WO 9420661 A1 WO 1994-EP625 19940303; NO  
 9503446 A WO 1994-EP625 19940303; FI 9504129 A WO 1994-EP625 19940303;  
 EP 687317 A1 WO 1994-EP625 19940303; BR 9405880 A WO 1994-EP625  
 19940303; JP 08503255 W WO 1994-EP625 19940303; EP 687317 B1 WO  
 1994-EP625 19940303; DE 59401045 G WO 1994-EP625 19940303; SK 9500729  
 A3 WO 1994-EP625 19940303; NO 180805 B WO 1994-EP625 19940303; HU  
 70690 T WO 1994-EP625 19940303; US 5668216 A WO 1994-EP625 19940303;  
 HU 214051 B WO 1994-EP625 19940303; JP 2739611 B2 WO 1994-EP625  
 19940303; RU 2101404 C1 WO 1994-EP625 19940303; KR 138805 B1 WO  
 1994-EP625 19940303; CZ 287541 B6 WO 1994-EP625 19940303; SK 281475 B6  
 WO 1994-EP625 19940303; FI 114321 B1 WO 1994-EP625 19940303; CN  
 1106854 A CN 1994-102493 19940304; CN 1094145 C CN 1994-102493  
 19940304; CZ 9501407 A3 CZ 1995-1407 19940303; CZ 287541 B6 CZ

1995-1407 19940303; HU 70690 T HU 1995-1513 19940303; HU 214051 B HU 1995-1513 19940303; RU 2101404 C1 RU 1995-122798 19940303; SK 9500729 A3 SK 1995-729 19940303; SK 281475 B6 SK 1995-729 19940303; US 5668216 A US 1995-507290 19950829; US 5886121 A Cont of US 1995-507290 19950829; KR 138805 B1 KR 1995-703689 19950901; NO 9503446 A NO 1995-3446 19950901; NO 180805 B NO 1995-3446 19950901; FI 9504129 A FI 1995-4129 19950904; FI 114321 B1 FI 1995-4129 19950904; US 5886121 A US 1997-838448 19970407

FDT AU 675704 B Previous Publ AU 9462576 A; CZ 287541 B6 Previous Publ CZ 9501407 A; DE 59401045 G Based on EP 687317 A; ES 2094054 T3 Based on EP 687317 A; FI 114321 B1 Previous Publ FI 9504129 A; HU 214051 B Previous Publ HU 70690 T; JP 2739611 B2 Previous Publ JP 08503255 W; NO 180805 B Previous Publ NO 9503446 A; SK 281475 B6 Previous Publ SK 9500729 A; US 5886121 A Cont of US 5668216 A; AU 9462576 A Based on WO 9420661 A; EP 687317 A1 Based on WO 9420661 A; BR 9405880 A Based on WO 9420661 A; JP 08503255 W Based on WO 9420661 A; EP 687317 B1 Based on WO 9420661 A; DE 59401045 G Based on WO 9420661 A; AU 675704 B Based on WO 9420661 A; HU 70690 T Based on WO 9420661 A; US 5668216 A Based on WO 9420661 A; HU 214051 B Based on WO 9420661 A; JP 2739611 B2 Based on WO 9420661 A; CZ 287541 B6 Based on WO 9420661 A; SK 281475 B6 Based on WO 9420661 A

PRAI DE 1993-4306808 19930304

IC ICM C09J131-02; D04H001-064; D04H001-64  
ICS D04H001-058; D04H001-060

IPCR C04B0026-00 [I,C]; C04B0026-04 [I,A];  
C04B0026-06 [I,A]; C08L0031-00 [I,C]; C08L0031-02 [I,A];  
C08L0033-00 [I,C]; C08L0033-06 [I,A]; C09J0131-00 [I,C]; C09J0131-02 [I,A]; C09J0131-04 [I,A]; C09J0133-04 [I,A]; C09J0133-04 [I,C];  
C09J0133-06 [I,A]; C09J0133-06 [I,C]; C09J0135-00 [I,C]; C09J0135-02 [I,A]; D04H0001-42 [I,A]; D04H0001-42 [I,C]; D04H0001-58 [I,A];  
D04H0001-58 [I,C]; D04H0001-60 [I,A]; D06M0015-21 [I,C]; D06M0015-263 [I,A]; D06M0015-285 [I,A]; D06M0015-29 [I,A]; D06M0015-333 [I,A];  
D06M0023-08 [I,A]; D06M0023-08 [I,C]

EPC C04B0026-04; C04B0026-06; D04H0001-42; D04H0001-58; D04H0001-60;  
D06M0015-263; D06M0015-285; D06M0015-29; D06M0015-333; D06M0023-08

NCL NCLM 525/170.000  
NCLS 526/307.700

FCL C08L0031-02; C08L0033-06; C09J0131-02 JCX; C09J0131-04 Z; C09J0133-04;  
C09J0133-06 JDB; C09J0135-02 JDB; D04H0001-58 A

FTRM 4J002; 4J040; 4L047; 4L047/AA03; 4L047/AA04; 4L047/AA08; 4L047/AA09;  
4L047/AA10; 4L047/AA12; 4L047/AA14; 4L047/AA15; 4L047/AA17;  
4L047/AA18; 4L047/AA21; 4L047/AA23; 4L047/AA29; 4J002/AB01.1;  
4L047/AB02; 4J002/AD03.1; 4J002/AH00.1; 4L047/BA03; 4L047/BA04;  
4L047/BA13; 4J002/BB02.1; 4J002/BB03.2; 4J002/BB12.1; 4J002/BB12.2;  
4L047/BC02; 4J002/BC03.2; 4L047/BC03; 4L047/BC04; 4L047/BC05;  
4L047/BC06; 4L047/BC07; 4L047/BC10; 4L047/BC14; 4J002/BD04.1;  
4J002/BD04.2; 4J002/BD15.1; 4J002/BF01.2; 4J002/BF02.2; 4J002/BF03.2;  
4J002/BG04.2; 4J002/BG05.2; 4J002/BG06.2; 4J002/BG10.1; 4J002/BG13.2;  
4J002/BH02.2; 4L047/CA20; 4L047/CB06; 4L047/CB09; 4L047/CC12;  
4J002/CF00.1; 4J002/CL00.1; 4J002/DA01.6; 4J002/DB01.6; 4J040/DB06.1;  
4J040/DC05.1; 4J040/DE02.1; 4J040/DE03.1; 4J002/DE07.6; 4J002/DE08.6;  
4J002/DE09.6; 4J002/DE11.6; 4J002/DE14.6; 4J002/DE18.6; 4J002/DE23.6;  
4J002/DF01.6; 4J040/DF04.1; 4J040/DF05.1; 4J040/DG01.1; 4J002/DJ00.6;  
4J002/DJ01.6; 4J002/DK00.6; 4J002/FA04.1; 4J002/FA04.6; 4J040/GA05;  
4J040/GA07; 4J040/GA08; 4J040/GA22; 4J040/GA25; 4J002/GC00;  
4J002/GK02; 4J002/GN00; 4J040/JA07; 4J040/JB02; 4J040/LA02;  
4J040/LA05; 4J040/LA06; 4J040/LA08; 4J040/LA11; 4J040/MA01;  
4J040/MA04; 4J040/MA05; 4J040/MA08; 4J040/MA09; 4J040/MA10;  
4J040/MA11; 4J040/MA13; 4J040/MB02; 4J040/NA10; 4J040/PA04;  
4J040/PA17; 4J040/PA18; 4J040/PA21; 4J040/PA25; 4J040/PA30;



4J040/PA33; 4J040/PA34

AB DE 4306808 A1 UPAB: 20060109

The use of crosslinkable, redispersible dispersion powders (I) based on vinyl ester copolymers (II) and (meth)acrylate ester copolymers (III) as binders for the dry bonding of fibre materials is claimed. (II) contain vinyl ester(s) of unbranched or branched 1-15C alkanolic acids and (III) contain (meth)acrylate ester(s) of 1-10C alcohols as monomers, and both (II) and (III) contain 0.1-10 weight% N-methylol-(meth)acrylamide (NMA or NMMA). The bonding process comprises combining the fibre material (opt. mechanically precompact) with 5-50 weight% (I) by sprinkling (I) onto or into the fibre, shaking (I) into the fibre or mixing directly, moistening (before or after mixing) with 5-60 weight% water and heating the sheet or moulding at 100-200 deg.C and up to 100 bar to bind the fibres.

USE - Used for fibre binding in the production of mouldings from fibre materials, for binding glass fibres or cotton wool, for the production of non-woven fabric from fibres and for the production of needled felt (claimed). Specific fibre substrates are wood and cellulose fibres, wool, cotton, mineral and ceramic fibres, synthetic fibres based on polymers such as viscose, polyethylene, polypropylene, polyester, polyamide, polyacrylonitrile or carbon fibre, and fibres of vinyl chloride or TFE (co)polymers (claimed).

ADVANTAGE - (I) can be used as a powder, has a high wet strength and good thermal stability, and can be processed without toxic emissions. Where aqueous systems are traditionally used (e.g. bonding non-woven fabric), the use of (I) results in lower drying costs and less effluent; where curable systems such as phenolic resins are used (e.g. glass fibre binding, moulded fibre prods.), the advantages of (I) are lower reaction temps. and simpler reaction mixts. ABDT DE4306808

The use of crosslinkable, redispersible dispersion powders (I) based on vinyl ester copolymers (II) and (meth)acrylate ester copolymers (III) as binders for the dry bonding of fibre materials is claimed. (II) contain vinyl ester(s) of unbranched or branched 1-15C alkanolic acids and (III) contain (meth)acrylate ester(s) of 1-10C alcohols as monomers, and both (II) and (III) contain 0.1-10 weight% N-methylol-(meth)acrylamide (NMA or NMMA). The bonding process comprises combining the fibre material (opt. mechanically precompact) with 5-50 weight% (I) by sprinkling (I) onto or into the fibre, shaking (I) into the fibre or mixing directly, moistening (before or after mixing) with 5-60 weight% water and heating the sheet or moulding at 100-200 deg.C and up to 100 bar to bind the fibres.

USE

Used for fibre binding in the production of mouldings from fibre materials, for binding glass fibres or cotton wool, for the production of non-woven fabric from fibres and for the production of needled felt (claimed). Specific fibre substrates are wood and cellulose fibres, wool, cotton, mineral and ceramic fibres, synthetic fibres based on polymers such as viscose, polyethylene, polypropylene, polyester, polyamide, polyacrylonitrile or carbon fibre, and fibres of vinyl chloride or TFE (co)polymers (claimed).

ADVANTAGE

(I) can be used as a powder, has a high wet strength and good thermal stability, and can be processed without toxic emissions. Where aqueous systems are traditionally used (e.g. bonding non-woven fabric), the use of (I) results in lower drying costs and less effluent; where curable systems such as phenolic resins are used (e.g. glass fibre binding, moulded fibre prods.), the advantages of (I) are lower reaction temps. and simpler reaction mixts.

PREPARATION

Pref., (I) are prepared by emulsion polymerisation at 0-100 deg.C in the presence of peroxide, azo or redox initiators, dispersants, opt. protective colloids etc., followed by spray drying.

## EXAMPLE

Nonwoven fabric of unit weight 50 g/m<sup>2</sup> was produced on a carding machine from polyester fibres (6.7 dtex/60 mm). The fabric was then sprinkled with 20 weight% water (w.r.t. fibre + binder) followed by 27.6 weight% dispersion powder based on a VA copolymer containing 1 weight% NMA, and bonded by heating at 180 deg.C. The prod. had maximum tensile load, 5.8 N; elongation, 42% (DIN 53857); after 1 min. in water, corresp. values were 2.2 N (37.9% w.r.t. dry value) and 33%. If the prod. was dried at 100 deg.C, corresp. values were 4.8/0.4 N and 46/37% (dry/wet).

## PREFERRED COMPOSITION

Copolymers (II) contain (a) 75-95 weight% vinyl acetate (VA), 5-25 weight% ethylene (E) and/or 5-30 weight% di-isopropyl fumarate (DIPF) and 0.1-10 weight% NMA, or (b) 50-70 weight% VA, 10-30 weight% VeoVa 9 and/or 10 (RTM), 5-25 weight% E and 0.1-10 weight% NMA, or (c) 15-50 weight% VA, 30-65 weight% vinyl chloride (VC) and/or DIPF, 5-25 weight% E and 0.1-10 weight% NMA, or (d) 50-70 weight% VA, 1-30 weight% n-butyl or 2-ethylhexyl acrylate (BA or EHA), 5-25 weight% E and 0.1-10 weight% NMA. Copolymers (III) contain (a) 30-70 weight% methyl methacrylate (MMA), 70-30 weight% BA and/or EHA and 0.1-10 weight% NMA, or (b) 30-70 weight% styrene, 70-30 weight% BA and/or EHA and 0.1-10 weight% NMA. After spreading (I) on the moist fibres, the water is removed by heating in a stream of air at 80-110 deg.C, and the given amount of water is sprayed onto the fibre again before thermal crosslinking.

FS CPI

MC CPI: A04-D04A; A04-F01A; A12-B02B; A12-S05G; F02-C01; F02-C02B1;  
L01-F03D; L02-J02B

L47 ANSWER 31 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN

AN 1991-172827 [24] WPIX Full-text

DNC C1991-074634 [16]

TI Slag containing hydraulic and high strength materials - has high strength composite material formed by kneading blast furnace slag with alkaline, water soluble, polymers, and wet curing

DC A93; L02

IN KAJIKAWA A; KIYOMOTO M; MANO K; MANO M; MURAKADO T; SAKURAI H; SHIZUME K; SHIZUME K

PA (KIYO-I) KIYOMOTO M; (NICH-N) NIPPON CHEM KK; (NIPK-C) NIPPON KAYAKU KK

CYC 9

|    |             |    |                    |    |       |
|----|-------------|----|--------------------|----|-------|
| PI | EP 431503   | A  | 19910612 (199124)* | EN |       |
|    | CA 2031364  | A  | 19910609 (199134)  | EN |       |
|    | JP 03237050 | A  | 19911022 (199148)  | JA |       |
|    | US 5342445  | A  | 19940830 (199434)  | EN | 9[0]  |
|    | EP 431503   | B1 | 19940914 (199435)  | EN | 14[0] |
|    | DE 69012523 | E  | 19941020 (199441)  | DE |       |
|    | RU 2051135  | C1 | 19951227 (199640)  | RU | 14[0] |
|    | JP 2668598  | B2 | 19971027 (199748)  | JA | 9[0]  |
|    | KR 9601424  | B1 | 19960127 (199907)  | KO |       |
|    | CA 2031364  | C  | 20020212 (200221)  | EN |       |

ADT EP 431503 A EP 1990-123041 19901201; JP 03237050 A JP 1989-317688 19891208; JP 03237050 A JP 1989-335188 19891226; JP 03237050 A JP 1990-317741 19901126; JP 2668598 B2 JP 1990-317741 19901126; DE 69012523 E DE 1990-69012523 19901201; EP 431503 B1 EP 1990-123041 19901201; DE 69012523 E EP 1990-123041 19901201; CA 2031364 C CA 1990-2031364 19901203; US 5342445 A Cont of US 1990-621801 19901204; KR 9601424 B1 KR 1990-20090 19901207; RU 2051135 C1 SU 1990-4894072 19901207; US 5342445 A US 1993-28638 19930309

FDT DE 69012523 E Based on EP 431503 A; JP 2668598 B2 Previous Publ JP 03237050 A

PRAI JP 1989-335188 19891226

JP 1989-317688 19891208  
 JP 1990-317741 19901126

IC ICM C04B028-08  
 IPCR C04B0111-27 [N,A]; C04B0028-00 [I,C]; C04B0028-08 [I,A]  
 EPC C04B0028-08  
 FCL C04B0028-08  
 Index: C04B0111:27; C04B0022:00; C04B0024:26 D; C04B0024:38 A  
 FTRM 4G012; 4G012/PB01; 4G012/PB03; 4G012/PB04; 4G012/PB06; 4G012/PB08;  
 4G012/PB31; 4G012/PB40; 4G012/PC01; 4G012/PC12; 4G012/PC13;  
 4G012/PE02; 4G012/PE07

AB EP 431503 A UPAB: 20060106  
 Hydraulic compsns. and high-strength composite materials using blast furnace slag powder are claimed. Their preparation by kneading, moulding and wet curing is also claimed. The compsn comprises: (A) Blast furnace slag powder, (B) Water-soluble polymer selected from gps. consisting of poly(methyl)acrylate, poly(meth) acrylamide or a copolymer or salt of these, and carboxymethylcellulose, (C) an alkaline substance, (D) water, and opt. (E) a fine aggregate of particle size less than 100 microns (pref. silica). The preparation consists of essentially kneading and moulding the components (A) (B) (C) (D) and opt. (E) followed by wet curing the moulded compsn.  
 USE/ADVANTAGE - A high strength composite with high bending strength and excellent water resistance can be obt'd. using as the region ingredient an inexpensive slag powder. @ (19pp Dwg.No.O/O)

FS CPI  
 MC CPI: A03-A04A; A04-D04A; A04-F04; A04-F06E; A12-R01A; L02-B03;  
 L02-D04A

L47 ANSWER 32 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
 AN 1989-372014 [51] WPIX Full-text  
 DNC C1989-164692 [21]  
 TI Aqueous dispersion of copolymer of vinyl ester and unsatd. epoxide - used in coating compsns., plaster or cement  
 DC A14; A21; A82; G02; L02  
 IN PERNER T; WISTUBA E  
 PA (BADI-C) BASF AG  
 CYC 11  
 PI EP 346728 A 19891220 (198951)\* DE 6[0]  
 DE 3820154 A 19891221 (199001) DE  
 ADT EP 346728 A EP 1989-110190 19890606; DE 3820154 A DE 1988-3820154 19880614  
 PRAI DE 1988-3820154 19880614  
 IPCR C04B0024-00 [I,C]; C04B0024-26 [I,A]; C04B0024-28 [I,A];  
~~C04B0026-00~~ [I,C]; ~~C04B0026-04~~ [I,A]; C08F0218-00 [I,C]; C08F0218-04 [I,A]; C09D0131-00 [I,C]; C09D0131-02 [I,A]  
 EPC C04B0024-26; C04B0024-28D; C04B0026-04; C08F0218-04; C09D0131-02  
 AB EP 346728 A UPAB: 20060106  
 Aqueous dispersions of copolymers containing epoxy gps. are obt'd. by copolymerising, in aqueous phase, (A) 50-96 weight% of a vinyl ester, (B) 4-50% of an alpha,beta-monoolefinically unsatd. epoxy cpd., (C) 0-48% of an alpha,beta-olefinically unsatd. mono- and/or di-carboxylic acid ester, and (D) 0-2% of further alpha,beta-olefinically unsatd. cpd(s). with COOH, sulphonate, phosphonate, phosphate, sulphonamide or amide gps.  
 Pref. (A) The ester is vinyl acetate, formate, laurate and/or versatate. (B) The epoxy cpd. is (meth)allyl glycidyl ether, 1,2-epoxybutyl acrylate and/or glycidyl crotonate. (C) The monomer is (m)ethyl (meth)acrylate, n-, iso- or tert.-butyl (meth)acrylate, lauryl (meth)acrylate, ethylhexyl (meth)acrylate, hydroxyethyl (meth)acrylate, and/or isobutyl maleate. (D) The monomer is (meth)acrylic acid, vinylsulphonic acid and/or (meth) acrylamide.  
 USE/ADVANTAGE - Use of the dispersions for preparation of coating compsns., plaster or cement, and the coating compsns. obt'd., are claimed. The

dispersions have good compatibility with pigments, good thixotropic flow, and good film-forming properties, and give coatings resistant to water and alkali. The synthetic resin-bonded plasters and dispersion colours give soil-resistant coatings, e.g. on wood, mineral substrates, and insulating materials (e.g. polystyrene foam), which retain their colour on weathering.

FS CPI

MC CPI: A04-F01A1; A05-A04; A12-B01E; A12-B01F; A12-R01A; G02-A02C1;  
G02-A02D3; L02-D14M

L47 ANSWER 33 OF 44 WPIX COPYRIGHT 2009 THOMSON REUTERS on STN  
AN 1980-05714C [04] WPIX Full-text  
TI Binder containing polymers with hydrazide gps. - which chelate heavy  
metal ions, for fire-resistant fibres forming fire-resistant materials  
DC A26; A81; F06; F09; L02; P42; P73  
IN IWAMURO Y; KOBAYASHI M; MIZOTE A; YAMAGUCHI H  
PA (OTSU-N) OTSUKA CHEMICAL KK; (SAKB-C) OTSUKA KAGAKU YAKUHHN KK;  
(SANP-C) SANSHO KK  
CYC 5  
PI DE 2927108 A 19800117 (198004)\* DE  
JP 55012839 A 19800129 (198010) JA  
FR 2430444 A 19800307 (198016) FR  
GB 2030988 A 19800416 (198016) EN  
US 4224103 A 19800923 (198041) EN  
GB 2030988 B 19821201 (198248) EN  
JP 62048000 B 19871012 (198744) JA  
JP 62282098 A 19871207 (198803) JA  
DE 2927108 C 19890126 (198905) DE  
PRAI JP 1987-115188 19790705  
JP 1978-83239 19780707  
IC IC B32B015-02; B32B017-04; B32B019-02; C08F005-00; C08F008-30;  
C08L033-08; C08L079-06; C09K021-02; D21H003-38; D21H003-68;  
D21H005-00  
IPCR ~~C04B0026-00~~ [I,C]; ~~C04B0026-04~~ [I,A]; C04B0038-00  
[I,A]; C04B0038-00 [I,C]; C08F0020-00 [I,C]; C08F0020-52 [I,A];  
C08F0020-60 [I,A]; C08F0008-00 [I,C]; C08F0008-42 [I,A]; C08K0003-00  
[I,C]; C08K0003-16 [I,A]; C09J0133-00 [I,A]; C09J0133-00 [I,C];  
C09J0133-24 [I,C]; C09J0133-26 [I,A]; C09K0021-00 [I,C]; C09K0021-14  
[I,A]; D21H0013-00 [I,C]; D21H0013-36 [I,A]; D21H0013-50 [I,A];  
D21H0017-00 [I,C]; D21H0017-00 [I,C]; D21H0017-37 [I,A]; D21H0017-45  
[I,A]; D21H0017-63 [I,A]; D21H0021-34 [I,A]; D21H0021-34 [I,C];  
D21J0001-00 [I,A]; D21J0001-00 [I,C]  
EPC C04B0026-04; C08F0008-42; C08K0003-16+L33/00; C09J0133-00+F;  
C09J0133-26+F; C09K0021-14; D21H0005-00B; D21H0017-45B  
NCL NCLM 162/135.000  
NCLS 162/152.000; 162/155.000; 162/156.000; 162/157.100; 162/157.600;  
162/159.000; 162/164.600; 162/164.700; 162/168.300; 162/168.400;  
162/183.000; 162/184.000; 162/185.000; 427/389.800; 427/393.300  
FCL C04B0038-00 301 C; C08F0020-52; C08F0020-60 MNH; D21H0013-50;  
D21H0017-37; D21H0017-63; D21H0021-34; D21H0003-68; D21H0005-00;  
D21H0005-00 E; D21H0005-00 X; D21H0005-18; D21J0001-00  
FTRM 4J023; 4J100; 4L003; 4L055; 4L003/AA00; 4L003/AA01; 4L003/AA03;  
4L003/AA09; 4L003/AA12; 4J023/AA13; 4L003/AA13; 4L003/AA14;  
4L003/AA17; 4J023/AA23; 4J100/AB02.Q; 4J100/AB02.R; 4L003/AB03;  
4J100/AC03.Q; 4J100/AC03.R; 4L003/AC03; 4J100/AC04.Q; 4J100/AC04.R;  
4L003/AC08; 4J023/AC12; 4J023/AC22; 4L055/AF01; 4L055/AF02;  
4L055/AF03; 4L055/AF04; 4L055/AF05; 4L055/AF09; 4L055/AF44;  
4L055/AG03; 4J100/AG04.Q; 4J100/AG04.R; 4L055/AG07; 4L055/AG08;  
4L055/AG16; 4L055/AG23; 4L055/AG63; 4L055/AG64; 4L055/AG67;  
4L055/AG68; 4L055/AG70; 4L055/AG71; 4L055/AG72; 4L055/AG73;  
4L055/AG74; 4L055/AG76; 4L055/AG89; 4L055/AG90; 4L055/AG91;

4L055/AG92; 4L055/AG93; 4L055/AH26; 4L055/AH37; 4J100/AJ02.Q;  
 4J100/AJ02.R; 4J100/AK32.P; 4J100/AK32.Q; 4J100/AL03.P; 4J100/AL03.Q;  
 4J100/AL04.P; 4J100/AL04.Q; 4J100/AM02.Q; 4J100/AM02.R; 4J100/AM15.P;  
 4J100/AM15.Q; 4J100/AM21.P; 4J100/AM39.P; 4J100/AS02.Q; 4J100/AS02.R;  
 4J100/BA03.H; 4J023/BA12; 4J023/BA22; 4J100/BA27.H; 4J100/BA29.P;  
 4J100/BA32.H; 4J023/BC03; 4J023/BC04; 4J023/BC06; 4L003/BG00;  
 4L003/BG01; 4G019/CA01; 4J100/CA04; 4J100/CA05; 4G019/CA07;  
 4J023/CA13; 4J023/CA23; 4J100/CA23; 4J100/CA31; 4G019/CB01;  
 4G019/CB06; 4G019/CC01; 4L003/CC05; 4J100/DA01; 4L003/DA04;  
 4J100/DA09; 4L003/DA12; 4J023/DA13; 4J023/DA23; 4J100/DA36;  
 4J100/DA38; 4J100/DA40; 4J023/EA01; 4L055/EA32; 4J023/FA04;  
 4J023/FA08; 4J023/FA09; 4L055/FA13; 4L055/FA19; 4L055/FA21;  
 4J023/FA23; 4J023/FA39; 4L055/GA21; 4L055/GA38; 4L055/GA44;  
 4J100/HA09; 4J023/HA11; 4J023/HA12; 4J023/HA30; 4J100/HA53;  
 4J100/HA61; 4J100/HB13; 4J100/HB16; 4J100/HB17; 4J100/HB29;  
 4J100/HC54; 4J100/JA11

AB DE 2927108 A UPAB: 20050418

Binder contains (a) a water-soluble polymer containing a hydrazide gp. of formula (I), or its adduct with water soluble alkaline earth salt of inorganic acid; and (b) 0.3-200 pt./100 pt. water-soluble polymer of adduct (a), of a heavy metal ion, forming chelates with (a). In (I), X = H, or carboxyl; Y = H or Me; A = acrylamide, methacrylamide, acrylate, methacrylate or maleic anhydride gp., B is a gp. derived from a monomeric cpd. which is copolymerisable with (meth)acrylamide, (meth)acrylate or maleic anhydride; the following relation exists between p, q and R;  $p+q+r = 100 \text{ mol.}\%$ ;  $20 \text{ mol.}\% \leq p \leq 100 \text{ mol.}\%$ ;  $0 \text{ mol.}\% \leq q + r \leq 80 \text{ mol.}\%$   
 Used as binder for fire-resistant fibres such as asbestos, glass, ceramic, carbon, metal, etc., which are manufactured into fire-resistant materials such as paper, laminates, etc.

FS CPI; GMPI

MC CPI: A04-D04; A04-F01; A10-E17; A10-E21; A10-E22; A12-A05; F02-C02B1;  
 F03-D; F05-A06; L02-D15

=> d 34-44 ibib abs ind

L47 ANSWER 34 OF 44 JAPIO (C) 2009 JPO on STN

ACCESSION NUMBER: 1999-092188 JAPIO Full-text

TITLE: AGGREGATE FOR MORTAR OR CONCRETE AND MORTAR OR CONCRETE COMPOSITION

INVENTOR: IZUMIDA KENJI; MAEHARA KIYOSHI; OGAWA MASANORI;  
 ITO YUJI

PATENT ASSIGNEE(S): NIPPON KAYAKU CO LTD

PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 11092188 | A    | 19990406 | Heisei | C04B014-04 |

#### APPLICATION INFORMATION

STN FORMAT: JP 1997-271897 19970919

ORIGINAL: JP09271897 Heisei

PRIORITY APPLN. INFO.: JP 1997-271897 19970919

SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1999

AN 1999-092188 JAPIO Full-text

AB PROBLEM TO BE SOLVED: To obtain an aggregate for preventing the growth of cracks in a concrete product, etc., due to water that penetrates into the cracks by mixing and kneading a mixture of a surfactant, a high water-

absorbing polymer, a non-hydraulic water-insoluble powdery material and water with ~~cement~~, sand and water and hardening the resultant kneaded material.  
 SOLUTION: A mixture of 1-35 weight% surfactant, 0.1-20 weight% high water-absorbing polymer, 1-35 weight% water-insoluble powdery material and 10-97.9 weight% water is prepared and added to ~~cement~~, sand and water by 1-40 weight% of the total amt of the ~~cement~~, sand and water. They are mixed and kneaded. The high water-absorbing polymer is preferably a poly(meth)acrylic acid derivative such as polysodium (meth)acrylate or poly(meth)acrylamide, in particular polysodium acrylate. The water-insoluble powdery material is preferably ~~clay~~.

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IC ICM C04B014-04  
 ICS C04B028-02

L47 ANSWER 35 OF 44 JAPIO (C) 2009 JPO on STN  
 ACCESSION NUMBER: 1998-279938 JAPIO Full-text  
 TITLE: PRODUCTION OF REGENERATED SOIL  
 INVENTOR: MORI KENJI  
 PATENT ASSIGNEE(S): MITSUBISHI CHEM CORP  
 PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 10279938 | A    | 19981020 | Heisei | C09K017-22 |

#### APPLICATION INFORMATION

STN FORMAT: JP 1998-88595 19980401  
 ORIGINAL: JP10088595 Heisei  
 PRIORITY APPLN. INFO.: JP 1998-88595 19980401  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1998

AN 1998-279938 JAPIO Full-text

AB PROBLEM TO BE SOLVED: To produce recycling soil excellent in strength and water permeability in a manner to contribute to the environmental protection, without sun drying of the construction soil, by mixing the construction soil and a specific polymer powder, mixing the resultant granules with powdery lime in a specific mixer and aging the resulting mixture. SOLUTION: (A) The soil from the constitution site is mixed with (B) a carboxyl-bearing water-soluble polymer powder, for example, a (meth)acrylic acid (or its salt) and a (meth)acrylamide copolymer powder with a weight- average particle size of 0.05-0.4 mm in a mixer to form granules. To the granules, are added (C) a lime powder (for example, quick lime with an average particle size of <=1 mm and they are mixed by means of a mixer, for example, of a drum type, a screw type, a wavy oscillation conveyer type or a horizontal oscillation type and then aged.

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IC ICM C09K017-22  
 ICS E02D003-00; E02F007-00  
 ICI C09K103:00

L47 ANSWER 36 OF 44 JAPIO (C) 2009 JPO on STN  
 ACCESSION NUMBER: 1997-025481 JAPIO Full-text  
 TITLE: COLORED GRANULAR SOIL  
 INVENTOR: MORI KENJI  
 PATENT ASSIGNEE(S): MITSUBISHI CHEM CORP  
 SOIL BEST:KK  
 PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 09025481 | A    | 19970128 | Heisei | C09K017-06 |

## APPLICATION INFORMATION

STN FORMAT: JP 1995-177149 19950713  
 ORIGINAL: JP07177149 Heisei  
 PRIORITY APPLN. INFO.: JP 1995-177149 19950713  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1997

AN 1997-025481 JAPIO Full-text

AB PROBLEM TO BE SOLVED: To obtain a colored granular ~~soil~~ beautiful in appearance, capable of being easily repaired, when faded, capable of using a water-containing ~~soil~~ generated on a construction work as a raw material, capable of reducing the wasting of the generated ~~soil~~, and useful as a joint ~~soil~~ or bottom ~~soil~~ for turfs, a bunker sand for golf courses, etc., by coloring a specific regenerated ~~soil~~ with a coloring agent.  
 SOLUTION: A water-containing ~~soil~~ is mixed with a water-soluble polymer [e.g. a (meth)acrylic acid (salt).(meth)acrylamide copolymer containing structural units comprising a carboxyl group-having monomer component in an amount of 5-60mol.% based on the whole structural units], granulated, and subsequently treated with a solidifying agent (e.g. calcined ~~lime~~, a hydraulic ~~cement~~). The generated ~~soil~~ is colored with a coloring agent (e.g. an aqueous coating material, a disperse pigment, an organic pigment).  
 COPYRIGHT: (C)1997,JPO

IC ICM C09K017-06

ICS C09K017-14; C09K017-20; C09K017-42; C09K017-44; C09K017-48;  
 C09K017-50

ICI C09K101:00

L47 ANSWER 37 OF 44 JAPIO (C) 2009 JPO on STN

ACCESSION NUMBER: 1996-073852 JAPIO Full-text

TITLE: MATERIAL FOR CIVIL CONSTRUCTION AND CREATION OF  
 WATER-PERMEATING GROUND

INVENTOR: MORI KENJI

PATENT ASSIGNEE(S): MITSUBISHI CHEM CORP

PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 08073852 | A    | 19960319 | Heisei | C09K017-42 |

## APPLICATION INFORMATION

STN FORMAT: JP 1994-240820 19940909  
 ORIGINAL: JP06240820 Heisei  
 PRIORITY APPLN. INFO.: JP 1994-240820 19940909  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1996

AN 1996-073852 JAPIO Full-text

AB PURPOSE: To obtain the subject material comprising a regenerated ~~soil~~ produced by granulating and solidifying a water-containing ~~soil~~ by a specific method, capable of being widely used not only for re-burying pipes on road works but also for creating golf courses, grounds, etc., because 'of having excellent water permeability and capable of shortening a construction time, etc.  
 CONSTITUTION: This material comprises a regenerated ~~soil~~ obtained by adding a water-soluble polymer [preferably a (meth)acrylamide polymer containing (meth)acrylic acid or its salt] to a water-containing ~~soil~~, granulating the mixture, and subsequently treating the granules with a ~~lime~~ (preferably the powder of calcined ~~lime~~). The regenerated ~~soil~~ is preferably obtained by adding 0.01-0.5wt.% of the powdery water-soluble polymer having an average particle diameter of  $\leq 0.4\text{mm}$  to a water-containing ~~soil~~ generated on a construction work, etc., granulating the mixture with a biaxial mixer having mixing and granulating functions for  $\geq 20\text{sec}$ , adding 0.5-10% of powdery ~~lime~~

having particle diameters of  $\leq 1\text{mm}$  to the granulated soil, stirring the mixture with a rolling mixer utilizing the difference of elevation to solidify the mixture. The obtained regenerated soil is preferably used after aged for two or three days.

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IC ICM C09K017-42  
ICS C09K017-22; C09K017-48  
ICI C09K103:00

L47 ANSWER 38 OF 44 JAPIO (C) 2009 JPO on STN  
ACCESSION NUMBER: 1996-041460 JAPIO Full-text  
TITLE: AGRICULTURAL MATERIAL AND PRODUCTION THEREOF  
INVENTOR: MORI KENJI  
PATENT ASSIGNEE(S): MITSUBISHI CHEM CORP  
PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 08041460 | A    | 19960213 | Heisei | C09K017-42 |

#### APPLICATION INFORMATION

STN FORMAT: JP 1994-196256 19940729  
ORIGINAL: JP06196256 Heisei  
PRIORITY APPLN. INFO.: JP 1994-196256 19940729  
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1996

AN 1996-041460 JAPIO Full-text

AB PURPOSE: To obtain the material, useful not only for refilling embedded pipes for road construction but also as horticultural and planting soil and a soil neutralizing agent for a paddy field and a plowland and excellent in water permeability, etc., by adding a water-soluble polymer to hydrous soil, granulating the resultant soil and then treating the granulated soil with lime.

CONSTITUTION: This agricultural material which is reclaimed soil is obtained by adding a water-soluble polymer [preferably an acrylamide- or a methacrylamide-based polymer containing (meth)acrylic acid or a salt thereof] in an amount of preferably 0.02-0.5wt.% based on soil to be treated to the hydrous soil, granulating the resultant soil, then treating the obtained grains with lime powder (preferably quick lime powder) having  $\leq 1\text{mm}$  grain diameter and uniformly disperse the lime powder on the grain surfaces. The amount of the lime powder used is preferably 1-5wt.% based on the soil to be treated and the water-soluble polymer is preferably used as a powder having  $\leq 0.4\text{mm}$  average particle diameter. COPYRIGHT: (C)1996,JPO

IC ICM C09K017-42  
ICS A01G001-00; C09K017-06; C09K017-48  
ICI C09K101:00

L47 ANSWER 39 OF 44 JAPIO (C) 2009 JPO on STN  
ACCESSION NUMBER: 1995-097574 JAPIO Full-text  
TITLE: METHOD FOR PREVENTING FLOWING OF SURFACE SOIL  
INVENTOR: MORI KENJI  
PATENT ASSIGNEE(S): MITSUBISHI CHEM CORP  
PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 07097574 | A    | 19950411 | Heisei | C09K017-42 |

#### APPLICATION INFORMATION



10/557,620

STN FORMAT: JP 1993-242928 19930929  
 ORIGINAL: JP05242928 Heisei  
 PRIORITY APPLN. INFO.: JP 1993-242928 19930929  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1995

AN 1995-097574 JAPIO Full-text

AB PURPOSE: To improve the water permeability and environmental pollution resistance of erosive ~~soil~~ and efficiently prevent the flowing of surface ~~soil~~ made by a civil engineering work, etc., by adding the powder of a specific polymer and specified ~~lime~~ to the erosive ~~soil~~ and subsequently granulating the erosive ~~soil~~ mixture. CONSTITUTION: Erosive ~~soil~~ having a water content of 10-40% is mixed with (A) the powder of a carboxyl group-containing water-soluble polymer such as (meth)acrylic acid (salt)-(meth) ~~acrylamide~~ copolymer having an average particle diameter of <=0.4mm preferably in an amount of 0.01-1wt.% and subsequently with (B) powdery ~~lime~~ having an average diameter of <=1mm preferably in an amount of 0.2-10wt.% to prevent the flowing of the surface ~~soil~~. The weight ratio of the components A/B is preferably 1/1 to 1/100.

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IC ICM C09K017-42

ICS C09K017-48; E02D003-00; E02D017-20

ICI C09K105:00

L47 ANSWER 40 OF 44 JAPIO (C) 2009 JPO on STN

ACCESSION NUMBER: 1994-057250 JAPIO Full-text  
 TITLE: METHOD OF STABILIZING SOFT GROUND  
 INVENTOR: MORI KENJI; NISHIJIMA SATOSHI  
 PATENT ASSIGNEE(S): MITSUBISHI KASEI CORP  
 TOKYO KANKYO SERVICE KK

PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 06057250 | A    | 19940301 | Heisei | C09K017-00 |

APPLICATION INFORMATION

STN FORMAT: JP 1992-215019 19920812  
 ORIGINAL: JP04215019 Heisei  
 PRIORITY APPLN. INFO.: JP 1992-215019 19920812  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1994

AN 1994-057250 JAPIO Full-text

AB PURPOSE: To stabilize the properties of soft ground at the site where the surface stratum occurs, to effectively utilize the ground and to heighten the efficiency of working at the site by adding a water-soluble carboxylated polymer powder to the surface stratum at the site and adding ~~lime~~ to the resulting mixture. CONSTITUTION: This method comprises adding a water-soluble carboxylated polymer powder to the surface stratum of a highly water-containing soft ground having such flow as to correspond to a slump value of above 4cm, particularly 5-25cm at the site where the surface stratum occurs and adding ~~lime~~ to the resulting mixture. The water-soluble polymer used is a polymer of a water solubility of at least 1g/100ml and is exemplified by a copolymer of (meth) acrylic acid or its salt with (meth) ~~acrylamide~~. Although the ~~limes~~ used include quick ~~lime~~ and slaked ~~lime~~, quick ~~lime~~ is desirable. Although the amounts of use vary with the water content of the water-containing ground (surplus ~~soil~~), the water-soluble carboxylated polymer is used in an amount of usually 0.001-1wt.% based on the surplus ground, and the ~~lime~~ is used in an amount of usually 0.2-20wt.% based on the ground.

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IC ICM C09K017-00

ICS E02D003-00

L47 ANSWER 41 OF 44 JAPIO (C) 2009 JPO on STN  
 ACCESSION NUMBER: 1993-059363 JAPIO Full-text  
 TITLE: IMPROVING AGENT FOR HYDROUS ~~SOIL~~  
 INVENTOR: SHIRAGAMI MITSUAKI; MORI KENJI  
 PATENT ASSIGNEE(S): MITSUBISHI KASEI CORP  
 PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 05059363 | A    | 19930309 | Heisei | C09K017-00 |

## APPLICATION INFORMATION

STN FORMAT: JP 1991-220082 19910830  
 ORIGINAL: JP03220082 Heisei  
 PRIORITY APPLN. INFO.: JP 1991-220082 19910830  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1993

AN 1993-059363 JAPIO Full-text

AB PURPOSE: To obtain an improving agent for hydrous ~~soil~~, composed of fly ash, ~~lime~~, gypsum and a water-soluble polymer, capable of improving ~~soil~~ in a plant without drying the ~~soil~~ in the sun and directly reutilizable as a resource for back filling, etc.  
 CONSTITUTION: The objective improving agent is composed of (A) fly ash, (B) ~~lime~~ and/or gypsum and (C) a water-soluble polymer such as homopolymer of (meth)acrylamide. COPYRIGHT: (C)1993,JPO&Japio

IC ICM C09K017-00

ICS C09K017-00

L47 ANSWER 42 OF 44 JAPIO (C) 2009 JPO on STN  
 ACCESSION NUMBER: 1992-345685 JAPIO Full-text  
 TITLE: CONDITIONER FOR WATER-CONTAINING ~~SOIL~~  
 INVENTOR: SHIRAGAMI MITSUAKI; MORI KENJI  
 PATENT ASSIGNEE(S): MITSUBISHI KASEI CORP  
 PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 04345685 | A    | 19921201 | Heisei | C09K017-00 |

## APPLICATION INFORMATION

STN FORMAT: JP 1991-117664 19910522  
 ORIGINAL: JP03117664 Heisei  
 PRIORITY APPLN. INFO.: JP 1991-117664 19910522  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1992

AN 1992-345685 JAPIO Full-text

AB PURPOSE: To obtain the title conditioner which can condition surplus ~~soil~~ in construction, having high water content, to make it suitable for reuse as resources by using a carboxylated water-soluble polymer and ~~lime~~ as constituents. CONSTITUTION: The title conditioner contains a carboxylated water-soluble polymer [e.g. a (meth)acrylamide polymer containing (meth)acrylic acid or its salt] and ~~lime~~ (powdery quick ~~lime~~ or slaked ~~lime~~) preferably at a weight ratio of (1:2) to (1:250). By using this conditioner, surplus ~~soil~~ of high water content, which has hitherto been difficult to utilize and an object for illegal dumping, can be conditioned in a plant as it is without being dried in the sun so that it can be reused as resources for back filling, etc. COPYRIGHT: (C)1992,JPO&Japio

IC ICM C09K017-00

L47 ANSWER 43 OF 44 JAPIO (C) 2009 JPO on STN  
 ACCESSION NUMBER: 1991-024146 JAPIO Full-text  
 TITLE: MODIFIER FOR ~~BENTONITE~~  
 INVENTOR: IIJIMA SHIGERU  
 PATENT ASSIGNEE(S): DAI ICHI KOGYO SEIYAKU CO LTD  
 PATENT INFORMATION:

| PATENT NO   | KIND | DATE     | ERA    | MAIN IPC   |
|-------------|------|----------|--------|------------|
| JP 03024146 | A    | 19910201 | Heisei | C08L033-02 |

## APPLICATION INFORMATION

STN FORMAT: JP 1989-159935 19890622  
 ORIGINAL: JP01159935 Heisei  
 PRIORITY APPLN. INFO.: JP 1989-159935 19890622  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 1991

AN 1991-024146 JAPIO Full-text

AB PURPOSE: To obtain a modifier for ~~bentonite~~ improved in dispersibility, deflocculation properties, ~~cement~~ resistance and salt resistance and decreased in hygroscopicity by mixing a specified acid-type polymer with a powdery alkaline substance. CONSTITUTION: 90-10wt.% at least one acid-type polymer selected between a powdery (meth)acrylic polymer of a degree of polymerization of 20-500 and a copolymer of at least 50mol% (meth)acrylic acid with another acrylic monomer [e.g. (meth)acrylamide] is mixed with 10-90wt.% powdery alkaline substance (e.g. Na<SB>2</SB>CO<SB>3</SB>) and optionally another dispersant (e.g. tripolyphosphate) to obtain a modifier for ~~bentonite~~. 0.5-20wt.% this modifier is added to ~~bentonite~~. COPYRIGHT: (C)1991,JPO&Japio

IC ICM C08L033-02

ICA C09K007-02

L47 ANSWER 44 OF 44 JAPIO (C) 2009 JPO on STN  
 ACCESSION NUMBER: 2000-109831 JAPIO Full-text  
 TITLE: SOLIDIFYING MATERIAL FOR MOISTURE-CONTAINING  
 SOIL AND IMPROVEMENT OF SOLIDIFICATION OF  
 MOISTURE-CONTAINING SOIL  
 INVENTOR: SAKURAI TOSHIHIDE; UEDA MAKOTO; FUSE SHINSAKU  
 PATENT ASSIGNEE(S): UBE IND LTD  
 PATENT INFORMATION:

| PATENT NO     | KIND | DATE     | ERA    | MAIN IPC   |
|---------------|------|----------|--------|------------|
| JP 2000109831 | A    | 20000418 | Heisei | C09K017-10 |

## APPLICATION INFORMATION

STN FORMAT: JP 1998-279632 19981001  
 ORIGINAL: JP10279632 Heisei  
 PRIORITY APPLN. INFO.: JP 1998-279632 19981001  
 SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined  
 Applications, Vol. 2000

AN 2000-109831 JAPIO Full-text

AB PROBLEM TO BE SOLVED: To obtain a composition, which comprises, as its essential components, specified amounts of aluminium sulfate and/or iron sulfate and a lithium salt, and the balance alumina ~~cement~~, thereby improving the solidification-improving property of moisture-containing ~~soil~~. SOLUTION: The amount of aluminium sulfate and/or iron sulfate in the solidifying material ranges 10 to 30 pts.weight 100 pts.weight of the essential components and the amount of the lithium salt ranges from greater than 5 pts.weight to 5.3 pts.weight per 100 pts.weight of the essential components. The most

preferred lithium salt is lithium carbonate. The solidifying material may further comprise an inorganic porous moisture-absorbing material and/or an organic polymer moisture-absorbing material, so that the uniaxial compression strength of the soil obtained after improvement in solidification can further be improved, with the soil after the addition of the solidifying material suffering little variation in the pH value. The inorganic porous moisture-absorbing material preferably includes perlite or the like, and the organic polymer moisture-absorbing material preferably includes polyacrylamide, polymethacrylamide or the like.

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IC ICM C09K017-10

ICS B09B003-00; C09K017-02; C09K017-08; E02D003-12

ICI C09K103:00

=> d his nofile

(FILE 'HOME' ENTERED AT 11:42:25 ON 02 DEC 2009)

FILE 'HCAPLUS' ENTERED AT 11:42:32 ON 02 DEC 2009

L1 1 SEA SPE=ON ABB=ON PLU=ON US20070059108/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 11:42:43 ON 02 DEC 2009

L2 1 SEA SPE=ON ABB=ON PLU=ON 79-39-0/RN  
E POLYMETHACRYLAMINE/CN  
L3 1 SEA SPE=ON ABB=ON PLU=ON POLYMETHACRYLAMIDE/CN  
E PARAFFIN/CN  
L4 1 SEA SPE=ON ABB=ON PLU=ON PARAFFIN/CN  
E PARAFFINS/CN  
L5 3 SEA SPE=ON ABB=ON PLU=ON PARAFFINS/CN  
E ARGILLACEROUS/CN

FILE 'HCAPLUS' ENTERED AT 11:45:01 ON 02 DEC 2009

L6 2895 SEA SPE=ON ABB=ON PLU=ON L2  
L7 981 SEA SPE=ON ABB=ON PLU=ON L3  
L8 119 SEA SPE=ON ABB=ON PLU=ON L4  
L9 157 SEA SPE=ON ABB=ON PLU=ON L5  
L10 QUE SPE=ON ABB=ON PLU=ON SOIL? OR CLAY? OR ARGILLACEROUS  
?  
L11 135 SEA SPE=ON ABB=ON PLU=ON L10 AND (L6 OR L7)  
L12 1 SEA SPE=ON ABB=ON PLU=ON L11 AND L1  
L13 11 SEA SPE=ON ABB=ON PLU=ON L11 AND (CEMENT? OR LIME?)  
L14 0 SEA SPE=ON ABB=ON PLU=ON L13 AND (L8 OR L9)  
L15 0 SEA SPE=ON ABB=ON PLU=ON L11 AND (L8 OR L9)  
L16 1 SEA SPE=ON ABB=ON PLU=ON L11 AND PARAFFIN?  
L17 QUE SPE=ON ABB=ON PLU=ON KAOLINITE? OR MONTMORILLONITE  
SMECTITE? OR ILLITE? OR CHLORITE? OR BENTONITE? OR  
CERAMIC? OR PHYLLOSILICAT?  
L18 331 SEA SPE=ON ABB=ON PLU=ON L17 AND (L6 OR L7 OR ?METHACRYL  
AMID? OR ?METH ACRYLAMID?)  
L19 6 SEA SPE=ON ABB=ON PLU=ON L18 AND (L8 OR L9 OR PARAFFIN?)  
L20 17 SEA SPE=ON ABB=ON PLU=ON (L12 OR L13 OR L14 OR L15 OR  
L16) OR L19  
L21 7 SEA SPE=ON ABB=ON PLU=ON L20 AND CEMENT?/SC, SX  
L22 12 SEA SPE=ON ABB=ON PLU=ON L11 AND CEMENT?/SC, SX  
L23 20 SEA SPE=ON ABB=ON PLU=ON L18 AND CEMENT?/SC, SX  
L24 28 SEA SPE=ON ABB=ON PLU=ON (L21 OR L22 OR L23)  
L25 22 SEA SPE=ON ABB=ON PLU=ON L24 AND (1840-2003)/PRY, AY, PY

FILE 'WPIX' ENTERED AT 11:54:38 ON 02 DEC 2009

L26 QUE SPE=ON ABB=ON PLU=ON ?METHACRYLAMID? OR ?METH  
ACRYLAMID?  
L27 1029 SEA SPE=ON ABB=ON PLU=ON L26 AND (L10 OR L17)  
L28 95 SEA SPE=ON ABB=ON PLU=ON L27 AND CEMENT?  
L29 2 SEA SPE=ON ABB=ON PLU=ON L28 AND PARAFFIN?  
L30 1 SEA SPE=ON ABB=ON PLU=ON US20070059108/PN  
L31 0 SEA SPE=ON ABB=ON PLU=ON L27 AND ARGILLACEOUS?  
L32 3 SEA SPE=ON ABB=ON PLU=ON L28 AND C04B0026?/IPC  
L33 6 SEA SPE=ON ABB=ON PLU=ON (L29 OR L30 OR L31 OR L32)  
L34 9 SEA SPE=ON ABB=ON PLU=ON L27 AND C04B0026?/IPC  
L35 12 SEA SPE=ON ABB=ON PLU=ON L33 OR L34

10/557,620

FILE 'PASCAL' ENTERED AT 11:58:52 ON 02 DEC 2009

L36 19 SEA SPE=ON ABB=ON PLU=ON L26 AND (L10 OR L17)  
L37 0 SEA SPE=ON ABB=ON PLU=ON L36 AND (CEMENT? OR LIME?)

FILE 'COMPENDEX' ENTERED AT 11:59:23 ON 02 DEC 2009

L38 33 SEA SPE=ON ABB=ON PLU=ON L26 AND (L10 OR L17)  
L39 0 SEA SPE=ON ABB=ON PLU=ON L38 AND (CEMENT? OR LIME?)

FILE 'JAPIO' ENTERED AT 12:00:23 ON 02 DEC 2009

L40 11 SEA SPE=ON ABB=ON PLU=ON L38 AND (CEMENT? OR LIME?)

FILE 'HCAPLUS' ENTERED AT 12:42:28 ON 02 DEC 2009

L41 86 SEA SPE=ON ABB=ON PLU=ON (L6 OR L7) AND (CLAY? OR  
ARGILLACEROUS?)  
L42 0 SEA SPE=ON ABB=ON PLU=ON (L6 OR L7) AND ARGILLACEROUS?  
L43 22 SEA SPE=ON ABB=ON PLU=ON L25 OR L42  
L44 8 SEA SPE=ON ABB=ON PLU=ON L41 AND CEMENT?/SC, SX  
L45 7 SEA SPE=ON ABB=ON PLU=ON L44 AND (1840-2003)/PRY, AY, PY  
L46 22 SEA SPE=ON ABB=ON PLU=ON L43 OR L45

FILE 'HCAPLUS, WPIX, JAPIO' ENTERED AT 12:46:40 ON 02 DEC 2009

L47 44 DUP REM L46 L35 L37 L39 L40 (1 DUPLICATE REMOVED)  
ANSWERS '1-22' FROM FILE HCAPLUS  
ANSWERS '23-33' FROM FILE WPIX  
ANSWERS '34-44' FROM FILE JAPIO